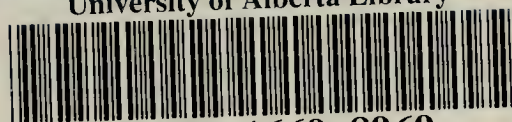


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March, 1974



Blue Jay

A JOURNAL OF NATURAL HISTORY AND CONSERVATION
FOR SASKATCHEWAN AND ADJACENT REGIONS

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Editor: Bernard Gollop

Assistant Editors: Robert W. Nero, Gary Seib, Vern Harms

Circulation: Lorne Scott

Editorial Assistants: Sandie Shaver, Molly Denson,
Bill Richards, Jean Meston, Ed Driver

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Bonaparte's Gull

R. E. Gehlert



Sunset on the Beaver River

Bruce McKee

WE ARE EARTH AND FIRE, WIND AND WATER: ONE NORTHERN SUMMER

by THOMAS J. BURNS*

I am glad I shall never be young without wild country to be young in. Of what avail are forty freedoms without a blank spot on the map? — Aldo Leopold

During the summer of 1973, two canoes followed some of the historic river systems of northern Saskatchewan, fulfilling many dreams and raising many hopes for the future of the North and its people. This story is about Wilf Allan of Nova Scotia (who started it all), Tom Burns of Regina, Bruce McKee of Saskatoon, Jan Olafson of Saskatoon (who we wish had been able to make the entire trip), Allan Wickstrom of Tompkins, our dogs, Brownie and the Squeekers, and

all the people who made the trip what it was.

It was the beginning of July when our two 16-foot cedar-canvas canoes set out from Meadow Lake Provincial Park bound for Cumberland House — 630 miles and 6 weeks distant. A week of preparation on the many lakes and streams of the park had already assured us of an easy paddle through the coming miles of marsh grasses, rushes and water lilies. A light breeze came up to fill our hastily improvised sails; ducks rose out of the thick growth; terns (right and left!) circled overhead; a Great Blue Heron took to

3424 College Ave.,
Regina, Saskatchewan.
S4T 1W4



Bruce McKee

Left to right: Jan Olofson, Tom Burns, Allan Wickstrom, Bruce McKee, Wilf Allan, with "the Squeekers" and "Brownie" in the foreground.

the wing near our boats; marsh birds protested our intrusion but it was the pelicans that excited us — soaring, floating on invisible currents in a cloudless sky. That first night the stars were barely visible, obscured by the brightness of the moon, and the loons called out from the stilled and shining waters, answered only by distant echoes.

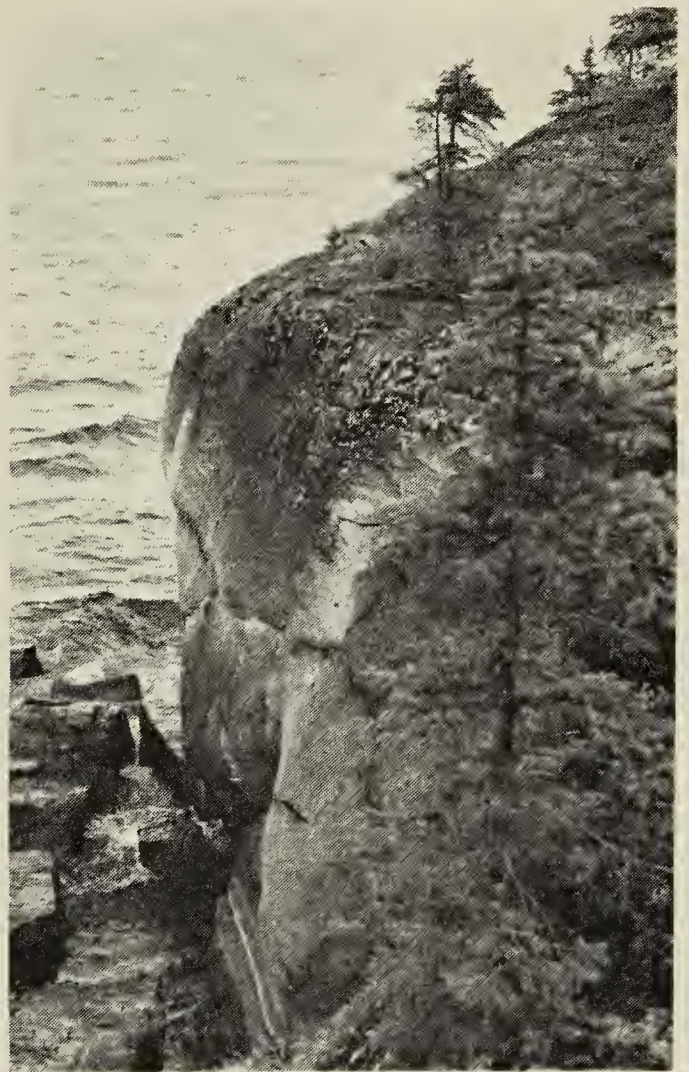
The lower Waterhen River, outside the park boundaries, alternated between fast water, where the shallow bed was strewn with quickly passing boulders, and slow meanders where the river was swallowed up in broad valleys. Periodically we came upon trappers' cabins, staring out over the river from clearings high above the banks. The land was rich: moose, deer, bear, muskrat, Golden Eagles, waterfowl and, of course, pelicans. One of

our camps was made at a long abandoned homestead; the imposing ruins of the cabin, barn and outbuildings were testimony to faded dreams of long ago in this lush and gentle wilderness. But if we were merely escaping from the reality of world crises, our success was little greater than was this homesteader's in the long run, for throughout the day we heard muffled explosions, as one possible future was rehearsed on the nearby air weapons test range.

Soon we left the Waterhen for the Beaver River where the general flood conditions all across the North became more apparent. The rapids, known to earlier voyageurs as "Grand", now appeared most unworthy of the name bearing only hints of the white horse and swift waters of other years. We saw no wildlife along the high, steep bank

of mixed softwoods, but as the river valley widened into marshlands on the following days, pelicans and every kind of waterfowl again accompanied us, past the small community of Beauval and on to Beaver River, a fishing settlement located where the river flows into Lac Ile à la Crosse. We crossed the lake, arriving at historic Ile à la Crosse to find the Co-op and the Bay closed and the annual sports day in progress. We took several days to reorganize our jumbled packs and visit Nap Johnson, an unforgettable character, who combines legendary northern hospitality with an amazing knowledge of the bush. He spent a day with us, drawing from memory maps of the rapids we would encounter up to Otter, giving us advice on paddling and snaring, or demonstrating the proper method of making trapper's bannock. He spoke of some of the problems of this northern community, which still must import fish crates and telephone poles from as far away as Cumberland, despite their attempts to obtain assistance for a sawmill to employ local labour. This was not to be the last time we would encounter realistic alternatives for community development that did not enjoy the favour of the government. Nap was busy trying to finish some of the cabins for his Alstead Lake Camp in time for fall hunting but he expressed a powerful longing to join us. Jan, unfortunately, had to return to Saskatoon, leaving us to push on. That evening, as we crossed the lake, now paddling Indian style, we passed more than 100 pelicans gathered on a rocky point beyond one of the many small islands we passed. Several took to the air, sharply silhouetted against the sinking sun.

Lac Ile à la Crosse is long and narrow; at some points the waters stretch as far as the eye can see, north and south. The winds can roll up huge waves by mid-morning and the swell does not die until late at night. The



Dipper Lake

Bruce McKee

clouds are spectacular, caught between the blues of sky and lake.

We were windbound for a good part of the time but our patience was soon rewarded with a tail wind that pushed us up the lake. We sighted our first Bald Eagle of the trip perched atop a dead poplar in the evening sun — a most magnificent bird. At the north end of the lake, just past Shagenaw Rapids lay Patuanak, gateway to the Churchill and to the Canadian Shield, our last provisioning point before Missinippi. Our tents pitched beside the Hudson's Bay Post, we eagerly awaited the sunrise. In our excitement that morning we missed the outlet of Shagenaw Lake, but eventually reached Drum Rapids, after passing a cross erected to Louis Riel's sister, who had hidden here during the ill-fated uprising of 1885. This was the Churchill at last: Leaf, Deer and Dipper Rapids, each more spectacular

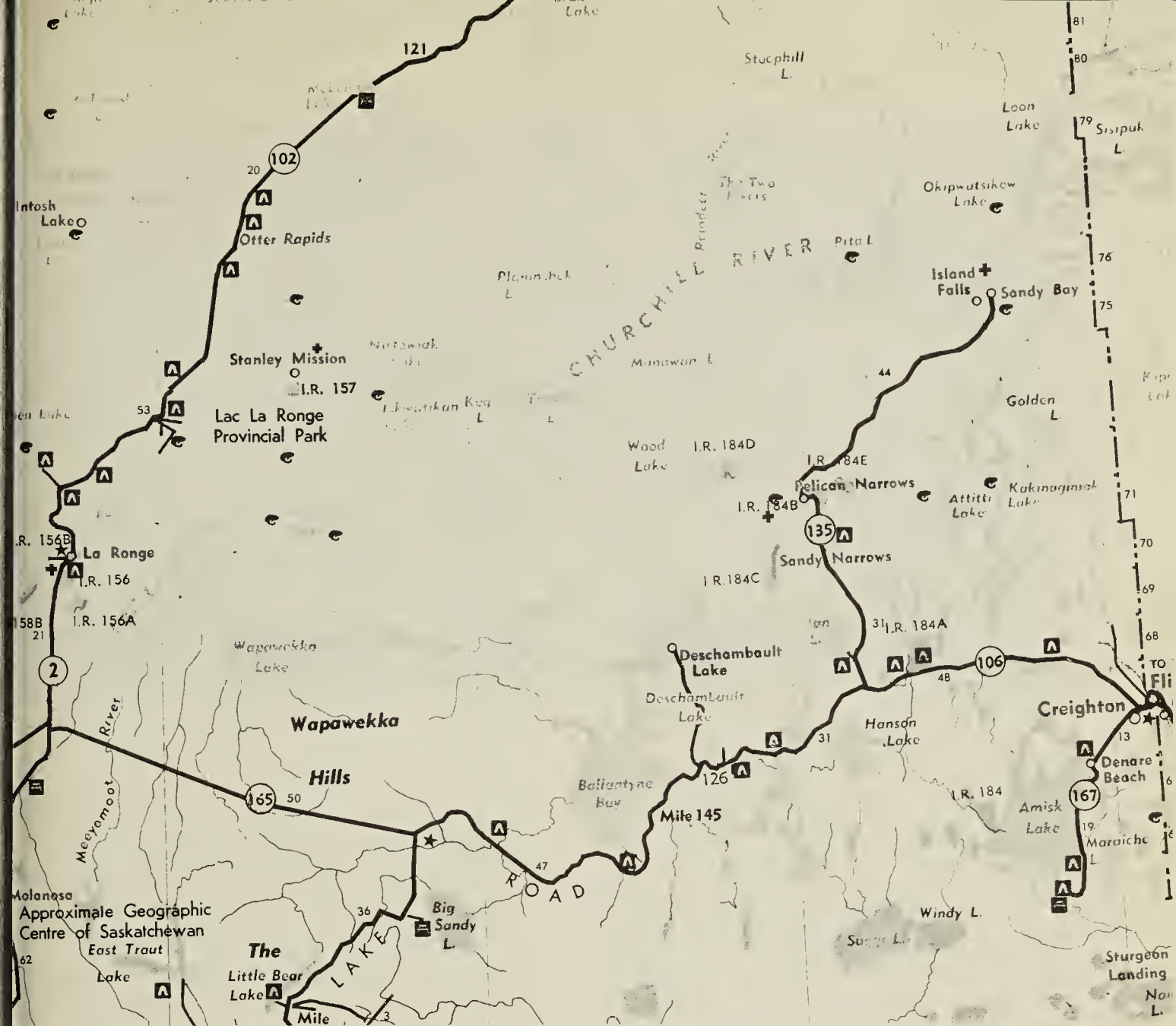


Churchill River from Peter Pond Lake to Manitoba.

than the other. But after this brief introduction, we encountered the other face of the Churchill, paddling through winding channels of calm water to Dipper Lake, camping on an island for a lazy day of exploring, picking saskatoons and blueberries, fishing and, finally, watching a fiery sunset over the distant shore. After crossing Primeau Lake on a calm day, past Primeau village where Father Moraud had built his small church overlooking the river, we attempted running Crooked Rapids but one of the canoes capsized in the unusually fast current. The better part of the day was spent drying gear, repairing a broken gunnel and surveying the rapids to try to see how we managed such foolishness. The rough-hewn pine gunnel, however, became a sort of

status symbol, serving us well for the rest of the journey. We finished the lower set of Crooked in better form and camped just above Knee Rapids where we waited to portage the gear and the damaged canoe in the morning. As we made the second trip of the portage — we always made two trips, one for the gear and one for the canoe — we narrowly missed an encounter with a bear who made off with our marmalade and detergent, hotly pursued by Squeekers, our intrepid bear dog. Again we reorganized our gear before pushing off for one of the finest days of the summer on Knee Lake.

It was calm as we set out, but soon we were pushing against the strongest winds and waves and the hardest rain of the trip. We pulled into a small



horseshoe cove at the entrance to Bentley Bay, marked by another cross erected high upon a hill that rose sharply from the lake. We brewed some hot chocolate and huddled around a large fire built under a sheltering pine as the rain finally turned to mist. We left quietly, paddling down the mirror-like surface of the bay — the sun, the clouds, the wind, the rocks, the trees, the mists, the rain and the birds left a tangle of memories. The colour was red, a touch in the sky and a bold stroke across the rocks, seen through the lifting haze, out of which gulls flew as if from a void, passing overhead and again into the mist. The cry of the loon echoed through countless foggy bays. We slept late in the gentle morning rain but put in a full day of paddling when we were

unable to find a campsite in the Haultain Marshes until we had reached Snake Rapids.

The rapids along this part of the river were sheer joy and we stopped for a mid-afternoon swim on a sandy beach overlooking Cowpack Island and the burned-over shores of Snake Lake. We lost ourselves completely in Sandfly Lake, a collection of islands and rocks strewn helter-skelter from one end to the other, a pleasant detour that taught us to put the compass ahead of our own intuition. At Needle Falls, with its glassy ribbons of black water rearing up and exploding beside our tents, we prepared for a difficult day of navigation through Black Bear Island Lake where Nap had alerted us to an Indian pictograph (mentioned in the journal of Alexander Mackenzie).

Silent Rapids marked the entry to this lake on a five-eagle day that left a swirl of memories: a granite cliff face leaping out from the calm waters, a lone jackpine standing in a clearing, island after island of dark spruce stretching off into the hazy distance and a sudden storm passing over on a southwest wind. As we passed the Foster River, for the first time the waters were crystal clear and free of algae. We had the first of our many encounters with the Keche Mookoomanuk, the long knives, the American tourists found throughout the North in relentless search for the legendary great northern — jackfish to us. By the next morning we were thoroughly drenched and a fire was out of the question as long as the rain continued. We listened to the loons calling from every corner of this tangled lake.

We shot, portaged and lined the series of rapids that followed, but spent a quiet evening of reflection at the Lake of the Dead, recalling our breathless excitement and anticipating

our coming return to “civilization” symbolized by the great steel bridge at Otter Rapids, one day and over a mile of portages away. We could obtain no information on the Devils and cautiously resigned ourselves to the long portages. We arrived at Otter that evening and camped at the bridge to await an attempt at these famous rapids by Wilf and Allan. Soon after passing the shack tents of the native guides along the shore, we were in Missinippi, washing, showering and resting. Friends were to meet us here with provisions and we passed an evening with Peter Whitehead, a local canoe outfitter, who presented us with a magnificent set of maps for the rest of the trip and related some of his many experiences in the North.

Bruce and I went into La Ronge, the new “capital of the north”, to visit friends and savour the alien and oppressive atmosphere as the forces of white progress march relentlessly ahead. Wandering through the air conditioned government offices,



Black Bear Island Lake

Bruce McKee



Portage at Nistowiak Falls

Bruce McKee

egan to see the Churchill as both a river and a people under sentence of death. We were fortunate, though, to meet Peter Gregg, author of the DNR canoe route guides that we had so faithfully followed, building canoes in his workshop.

We set off for Stanley Mission in the rain, as an aircraft from one of the local lodges buzzed one of our canoes in a final gesture of the white man's arrogance. Our trip to Stanley was climaxed with a campsite overlooking the little white Gothic church that has stood there since 1850. Just out of Stanley and before Nepukituk Rapids we again encountered pictographs on the granite rock faces, depicting what appeared to be reindeer and hunters. On Drope Lake we explored an abandoned uranium mine, its huge diesel engine and steam boiler hardly used, as the forest moved in over the tailings and against the old buildings, reclaiming what it could. On the advice of Fred McKinnon, a Saskatoon canoeist we met in Black Bear Island Lake and again at Missinippi, we made the detour to Nistowiak Falls. There the green crystal waters of the Montreal River are turned into a swirling

creamy white jade, the spray tossed high into the air and against the shiny black granite walls spotted with emerald green moss. Then we stopped at Drinking Falls Lodge for the free coffee traditionally offered canoeists by many of the northern lodges.

We were windbound briefly by a true prairie wind that swept over Keg Lake and created enormous ripples where it blew against the powerful current of Grand Rapids at Trade Lake. Trade Lake marked the end of our Churchill trip, where the Portage de Traite led into the Saskatchewan system. We bade farewell to the Churchill, pushing our canoes along the yet unfinished marine railway, built for the government survey crews, out establishing bench marks and painting bright orange survey markers all about the area, spelling disaster for the local guides. The remains of the old skid trail and traces of the original portage still could be found alongside the fresh planking and shiny rails. At the end of the portage, one of several families camped here on their way to Pelican Narrows was preparing lunch while the baby slept in a hammock slung between two trees. This was not only the



Namew Lake

Bruce McKee

end of one part of our trip but perhaps the last time we would ever see these people in their own land.

We paddled through the shallow winding channels leading to Wood Lake and camped on a high, narrow spine of rock rising sharply from the water. A spectacular sunrise the next morning started us off down the lake where the light and shade played on the islands and the shore, revealing the reds, oranges and yellows of autumn. We kept our eyes open for the pelicans which we had missed since Black Bear Island Lake, expecting them to reappear near Pelican Narrows, but to no avail. We followed the meanders of Grassy Narrows, and pitched our tents along a low rock shelf facing the morning sun. The evening star was set in a glowing blue sky, an infinity beyond the rows of dark spruce and brightly coloured birches just across the river. We portaged the next two small rapids

before arriving at a particularly clear pictograph of a Mannigishi with his six fingers on each hand and six toes on each foot. We neglected to leave the traditional offering for good luck.

We shot Medicine Rapids, the last before Pelican Narrows, where we left our canoes behind to fly to Sandy Bay returning to Churchill for a visit with my brother, Peter Burns, who took us up the river in his motorized canoe — an exhilarating experience after 5 weeks of paddling! We again met Peter Gregg, preparing another book for the canoe route series, and passed an evening comparing notes on the progress of the government engineering crews. We visited the Hudson Bay Mining and Smelting dam at Island Falls and marvelled at the deserted townsite with its cement walks, fire hydrants and recreation hall. The 34 houses with their finished basements and sunny porches had sat

empty for 7 years since the dam was automated and the requests by the community to develop the site as a family resort had fallen on deaf ears. The people, who had seen the end of their fishing and trapping and later lost their jobs at the dam, were wary of the promises and claims made for hydroelectric and diversion schemes. The twilight drive brought us back to Pelican Narrows, anxious to resume our journey.

We were blown down Miron Lake by a northwest wind to the beginning of the Sturgeon Wier River at Corville Rapids. In a minor rapid just past the next portage, the mischievous Mannigishi grasped the gunnels of my canoe and gave me a second soaking but we soon dried out under the afternoon sun. At Dog Rapids we had our revenge, avoiding the portage by slipping along a little passage through the willows. As we passed Maligne Lake and the bridge at Mile 190 of the Hanlon Lake Road, we again had a strong current and rapids reminiscent of the Churchill. Wilf and Allan shot Leaf Rapids but we all portaged Scoop, a small but spectacular fall, surrounded by spruce, set against the clear blue sky. The wildlife, conspicuously absent along the Churchill returned here: herons, hawks and pelicans, as well as the ever-present eagles. Allan even managed to call up a loon! Snake Rapids provided a high point for Wilf and Allan, who narrowly missed a huge rock in this long and difficult rapid that could have ended the brief career of Wilf's Kildonan canoe. For Bruce and myself, under the weather (and the previous night's cooking!), the portage was difficult and help with our canoe was much appreciated as was the following day of rest. On the second night of our layover we were treated to a spectacular display of lightning that sent brilliant flashes of whiteness through the stillness of the forest. Just past a small Indian burial ground overlooking the river lay Spruce

Rapids, with its pretty portage and campsite littered with dead fish, rotten garbage, cans and beer bottles.

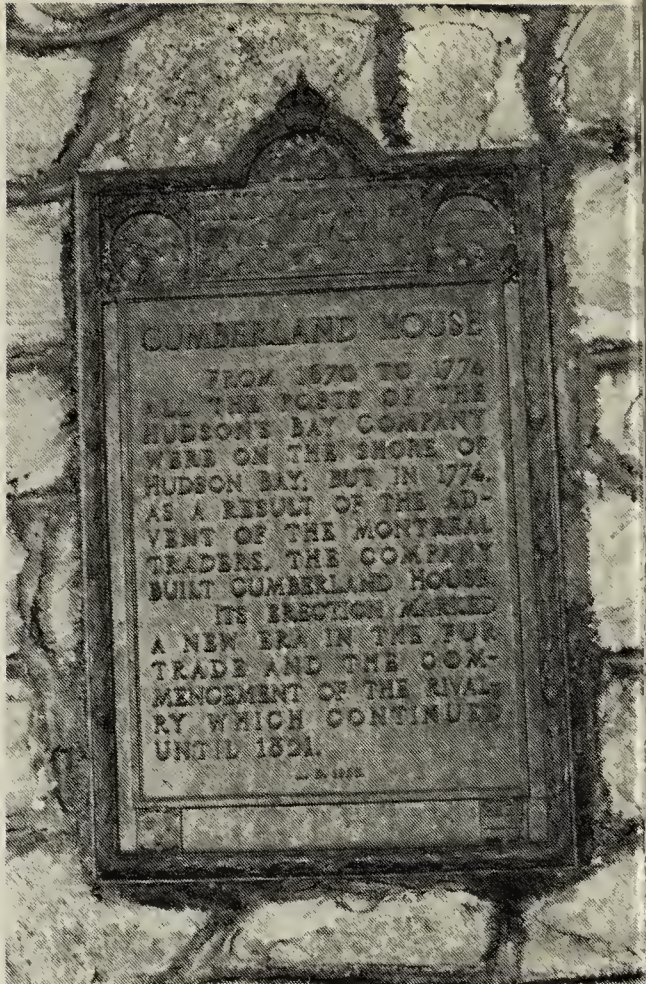
As we crossed Amisk Lake we bade farewell to the Shield, noting the bright orange lichens covering the limestone cliffs along the shore. Then we encountered the power boats from the resorts near Flin Flon, clearly marked by the distant stacks and smoke plume on the horizon. By late afternoon we reached the DNR campsite at the end of the lake where we met Bud Holm, a Winnipeg artist, painting wildlife of the north.

This next part of the Wier was also known as the Rivière Maligne, a name that caused me some concern until I realized it has been applied by upstream travellers! Our only detailed maps for the river to Sturgeon Landing were drawn by Peter Whitehead from aerial photographs and indicated 17 sets of rapids through the 100-foot drop and 20-mile run. We shot them all, including Crooked, which brought back memories of the Churchill, both in name and difficulty, on the most exhilarating day of the entire summer, a blur of birch and poplar, rocks and bears along the shore. We took water several times and one canoe was ignominiously grounded in the middle of L'Isle Rapids. The last 2½ miles to Sturgeon along Goose Creek was literally a continuous rapid, passing in a flash and ending abruptly as we sped past the docks at Namew Lake quite unable to stop.

We were all anxious to leave this tourist trap the next morning but our attempt at crossing Namew was partially thwarted when Bruce and I turned back in the face of strong head winds. It was a North Superior day as huge waves crashed against the rocky shore but as night fell and a brilliant red moon coloured the quiet waters, we paddled toward the distant beacon across the lake and rejoined Wilf and Allan. In the morning we set off

through Whitey Narrows as waves of storm clouds passed overhead. A beaver swam just ahead of us, slapping his tail and diving whenever our canoes drifted too close for his comfort. Soon we reached Cumberland House — the island where there are many spruce trees — almost an anticlimax after one black cloud released its fury upon us as we stumbled clown-like in the rain and hail through the oozing mud flats that signalled our arrival at the Saskatchewan. The trip ended in a manner fitting the spirit in which it was taken — quietly and unceremoniously, as the sun set against a cloudy sky, burning into our memories the 6 weeks of the Great Lone Land and its people.

Epilogue: Butler, writing in 1870, described Cumberland as unchanging, the same as it had been a century before but such is clearly no longer the case, if it ever was. The only thing that never seems to change is the grip that Western industrial society has on peripheral cultures and their lands — in Africa, in South America and even in northern Saskatchewan. We are still missionaries but now we are trying to sell our goods and services to the non-believer by destroying his sense of self-reliance. It is little wonder our society is so drawn to the wilderness experience in trying to recapture the spirit of human dignity, but so surprising that we refuse to understand why many of those who retain their dignity refuse to accept our ideals willingly. Remember that the North does not belong to us, nor to those holding legal title to the land, but to its people, who do not own the



Bruce McKee
Historic marker at Cumberland House

land but only know it, and in that, know themselves.

For afterwards a man finds pleasure in his pains, when he has suffered long and wandered long. — Homer

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MORSE, Eric W. 1971. *Fur trade canoe routes/Then and Now*, Queen's Printer, Ottawa.
OLSON, Sigurd F. 1961. *The lonely land*, Knopf New York.

* * * * *

In wildness is the preservation of the world.
Henry David Thoreau, Walking.

HENRY THOREAU AND SASKATCHEWAN'S NATURAL HISTORY

by VICTOR C. FRIESEN*

When Louis Agassiz, the zoology and geology professor at Harvard University a century ago, was once asked what he had done on his holidays, he reportedly answered that he had got halfway across his backyard — there was so much to observe. His feelings were akin to those of his acquaintance, Henry Thoreau, who sometimes sent the professor biological specimens from Concord, Massachusetts. It was Thoreau's boast that he had travelled much in his native township of Concord, implying that it was not necessary to travel elsewhere — a significant world was at his very feet.

Yet readers of Thoreau's nature classic, *Walden* (1854), may be interested to know that Thoreau had a keen interest in "Saskatchewan and adjacent regions". True, the nearest he ever got to the Canadian Northwest was a journey to Minnesota in 1861 with a fellow botanist, Horace Mann, Jr. It was there that they gained some first-hand knowledge of prairie plants, and it was there too that Thoreau first saw, and became fascinated by, the Thirteen-lined and the Franklin Ground squirrels, two of the common "gophers" of our own area farther north.

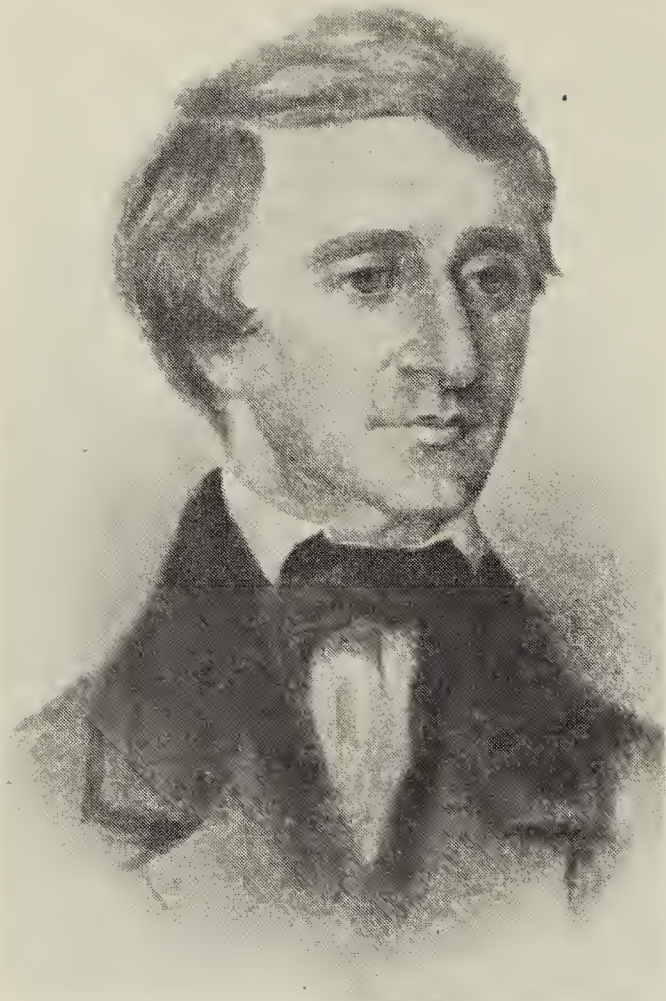
Thoreau's interest in Saskatchewan natural history stemmed chiefly from his reading of travel books. One of his

favorites was *Travels and adventures in Canada and the Indian Territories between the years 1760 and 1776*, written by Alexander Henry (the Elder). Henry, a fur trader, states in the preface that his account will describe, among other things, "the geography and natural history" of the region.² Henry's "region" included Cumberland House on the Saskatchewan River, Beaver (now Amisk) Lake, the Churchill River system to the north and the plains area to the south. In his own travel book, *A week on the Concord and Merrimack rivers* (1849) Thoreau comments on the country traversed by Henry in these terms: it is "an immense and shaggy but sincere country, summer and winter, adorned with chains of lakes and rivers . . ."⁸

Thoreau praises Henry's *Travels* for giving "not the *annals* of the country, but the natural facts, or *perennials*, which are ever without date."⁹ One such "perennial" pertains to the lighter yellowish-green colour of new shoots on pine branches. These shoots tend to bend eastward, Henry says, and serve Canadian Indians as a direction finder. Thoreau notes the same phenomenon in his own Concord woods a hundred years later.¹²

Of particular interest to Thoreau was Henry's description of a rocky hill near Beaver Lake.³ This account so influenced Thoreau that he borrowed some of the fur trader's phrases to describe his own climb of Mount Katahdin, Maine's highest mountain. Thoreau's celebrated description of

*P.O. Box 65,
Rosthern, Saskatchewan
S0K 3R0



Thoreau Society Inc.

Henry David Thoreau

this incident is recorded in the first chapter of *The Maine Woods* (1864). Wishing to convey an impression of the mountain's awesome grandeur, Thoreau refers to Katahdin as the natural home of legendary Titans,¹⁰ just as Henry had so referred to the almost inaccessible hill in Saskatchewan.

Thoreau's interest in the Saskatchewan region is also apparent in his reading of Henry Youle Hind's *North-west Territory: Reports of progress, together with a preliminary and general report on the Assiniboine and Saskatchewan Exploration Expedition*. Since this Canadian government publication was printed in Toronto, it would have been an obscure book in Massachusetts. Yet Thoreau was commenting on this edition in his *Journal* the following year.

In Hind's account Thoreau found much factual reporting of a scientific

nature. Facts like these always were grist to Thoreau's mill. He would have enjoyed learning, for instance, that Grizzly Bears still roamed the treeless plains, for Hind took precautions that his party should not be taken unawares at night by such marauders.⁴ Hind tells too of Whooping Cranes in the Touchwood Hills, where he says they are "common."⁵ When he refers to the fact that only small aspens and willows grow on the plains because Indian tribes periodically set fire to the prairies,⁶ Thoreau comments that the seeds of these trees, being both abundant and easily distributed by the wind, are the most likely to start growing afresh in burned-over areas.¹³

Thoreau's interest in books on Arctic exploration further acquainted him with the Saskatchewan scene. For example, Sir John Franklin's *Narrative of a Journey to the Shores of the Polar Sea (1819-1822)* describes in part an overland journey from Hudson Bay which takes Franklin up the Saskatchewan River to Fort Carlton, before proceeding north to the Arctic Ocean. Sir John Richardson accompanied Franklin as surgeon and naturalist and he remained behind for some months at Cumberland House and at Carlton while collecting biological specimens.

Richardson's account of this exercise, as given in Chapter III of the *Narrative*, reads very much like portions of Thoreau's own *Journal* which describes Concord flora and fauna. Both men have a sensuous approach to natural phenomena, recording many details about such things as colouration and taste, and both are interested in local folklore. This passage, by Richardson, is characteristic of both authors:

... a berry of bluish white colour
... is named *musqua-meena*, bear-berry, because these animals are said to fatten on it. The dwarf Canadian cornel bears a corymb of red berries, which are highly

ornamental to the woods throughout the country, but are not otherwise worthy of notice, for they have an insipid farinaceous taste.¹

Richardson's own book, *Arctic Searching Expedition*, Thoreau read the year after it was published and apparently bought his own copy of it. His book, ostensibly about the search for Franklin, also describes the author's overland journey to Cumberland House in 1848 and then his trip northwest along the Churchill River system. Here Richardson gives a much more detailed account of Saskatchewan flora and fauna than he could in Franklin's *Narrative*. Appendices help to sum up information about the region's mammals, birds, fish, insects, trees and flowers.⁷

Thoreau read this book closely — he refers to it 12 times in his *Journal* while reading it — and often one of Richardson's observations of our own region caused him to make a similar observation of his Concord area. When Thoreau sees a migrating Song Sparrow and a Fox Sparrow, he reflects what "heroic" lives similar birds must live in distant Rupert's Land that Richardson has spoken of. Although Thoreau would like to share

the birds' experiences there, he realizes that he has a world of his own to chart.¹¹

Thus, although Henry Thoreau remained for the most part in his own township of Concord, in his mind he often was travelling through Saskatchewan with early naturalists and explorers and noting the region's varied natural history.

¹FRANKLIN, J. 1823. *Narrative of a journey to the shores of the Polar Sea, in the years 1819, 20, 21 and 22*. J. Murray, London, pp. 88-89.

²HENRY, A. 1809. *Travels and adventures in Canada and the Indian territories between the years 1760 and 1776*. I. Riley, New York, p. v.

³HENRY, A. p. 328.

⁴HIND, H. Y. 1860. *Narrative of the Canadian Red River exploring expedition of 1857 and of the Assiniboine and Saskatchewan exploring expedition of 1858*, 2 vols. Longman, Green, Longman and Roberts, London, 1: 394-395.

⁵HIND, 1: 316.

⁶HIND, 1: 337.

⁷RICHARDSON, J. 1851. *Arctic searching expedition*, 2 vols. Longman, Brown, Green and Longman, London.

⁸THOREAU, H. D. 1906. *The writings of Henry David Thoreau*, 20 vols., Walden edn. Houghton Mifflin, Boston, 1: 230.

⁹THOREAU, 1: 231.

¹⁰THOREAU, 3: 70-71.

¹¹THOREAU, 9: 367-368.

¹²THOREAU, 10: 136.

¹³THOREAU, 19: 305.



Pasque-flower buds pushing through the soil in early spring.

Gary W. Seib

FORMATION OF THE SASKATCHEWAN NATURAL HISTORY SOCIETY

by MARGARET BELCHER*

The recent anniversary celebrated by the Saskatchewan Natural History Society marked the end of its first 25 years of activity. The provincial organization, however, is not the oldest natural history society in existence in Saskatchewan, nor indeed was it the first in this area to form an association of naturalists on a regional rather than a local basis. Before Saskatchewan became a province, and indeed until 1909, there existed a Territorial Natural History Society, and, from 1912 until at least 1917, a Saskatchewan Naturalists' Club whose annual report was printed as part of the Report of the Chief Game Guardian. The history of these early societies remains to be written.

Several local societies, as well, can claim the distinction of being older than the Saskatchewan Natural History Society. The Prince Albert Society's records go back to 1914, although the society did not remain active and was reorganized in 1954. The Regina Natural History Society, established in 1933, has a record of unbroken activity since that date, and still meets as it did 41 years ago on the third Monday of each month.

The immediate ancestor of the provincial society, however, was the Yorkton Natural History Society, organized in 1942 with Mrs. Isabel Priestly as president of the club and editor of its modest little



Mrs. Isabel Priestly

mimeographed bulletin the *Blue Jay*. For several years before this, the Yorkton group had "watched birds and had some pleasant times together", as Mrs. Priestly was later to write, but it was felt necessary to organize formally as a society if a real contribution was to be made to the community. Nevertheless, it remained Mrs. Priestly's conviction that "there is no need for a natural history society to be an alarmingly highbrow affair."

From the first issue, the *Blue Jay* was characterized by Mrs. Priestly's unaffected and sensitive appreciation of

*2601 Winnipeg Street
Regina, Saskatchewan

ature. Trained as a scientist, this charming and cultivated woman was able to establish a friendly bond with amateur naturalists across the province, who welcomed the bulletin as a means of sharing their observations. Her premature death on April 3, 1946, was a serious blow to the Yorkton Society and its publication. The freshness of Mrs. Priestly's observations of the prairies lingers in the last entry in her notebook, written only two weeks before her death: "April 8. Lovely morning. Walked out along the tracks to pond on west road. Meadowlarks singing, juncos everywhere, blue jays around fir trees. Ponds frozen over. No ducks or redwings, just one brewer's. On way home heard blue jay singing."

Following Mrs. Priestly's death, Cliff Shaw, a reporter for the *Leader-Post* who had been an active member of the Regina Natural History Society before coming to Yorkton, carried on her work as president and editor. By the summer of 1948, however, it was becoming difficult for the Yorkton Natural History Society to continue the publication of the *Blue Jay*. Although the Provincial Museum had undertaken the mimeographing of the bulletin, the Yorkton group found it increasingly hard to gather material and to assemble it in time to meet deadlines. Several numbers of the bulletin had been late and some had not appeared at all. Interest was rapidly falling off, and there were consequently fewer contributions. These difficulties prompted Mr. Shaw to enquire whether the Regina Natural History Society might help publish the *Blue Jay*. The Regina Society asked for a written proposal for consideration, and accordingly, on August 28, 1948, a letter was drafted by one of the active young members of the Executive of the Yorkton Society, Stuart Houston, and sent to the President of the Regina Society, Dr. George F. Ledingham, biology professor at the

Regina College of the University of Saskatchewan. The proposal was a simple one — an invitation to the Regina Society to share with the Yorkton Society the sponsorship of the *Blue Jay*, "thus making it the official bulletin of both Regina and Yorkton societies."

The Executive of the Regina Natural History Society met on September 7 and agreed to help ensure the publication of the *Blue Jay*. However, instead of Yorkton and Regina sharing the sponsorship of the *Blue Jay* as the official bulletin of both societies, as had been suggested in the Yorkton letter, the formation of a Saskatchewan Natural History Society with branches in various towns was proposed. Members of these branches would automatically become members of the provincial society and receive the *Blue Jay*, and half their fees would go to each of the two organizations.

Although the proposal for a provincial natural history society was made in Regina, there is no doubt that the idea of a provincial organization had been germinating for some time in the minds of *Blue Jay* subscribers scattered widely over the province. In fact, Mrs. Priestly had expressed such a sentiment in an editorial in 1943, saying that she would like to see "many more local clubs, all of which could then unite to form a federation of Saskatchewan naturalists."

The Yorkton Natural History Society consequently received with enthusiasm the proposals made by Dr. Ledingham on behalf of the Regina Society and approved them at a meeting held on September 30, 1948. The Yorkton Society thereby handed over to the provincial association the right to publish the *Blue Jay*, but it wished to make it one of the terms of the agreement that the association undertake to continue the name "Blue Jay" and to retain the dedication to the late Mrs. Priestly. The Yorkton society

also wished to publish a valedictory issue explaining its decision to turn over the publication to the provincial organization. It was agreed that Lloyd T. Carmichael, a science teacher at Scott Collegiate in Regina, should become editor, with an annual honorarium of \$100, and that the Regina Society should name a secretary and ask Fred G. Bard, Director of the Provincial Museum, to become the head official (an honour that Mr. Bard later declined).

On October 1, 1948, there were 133 paid-up subscribers and 119 to whom renewal notices had been sent. However, few contributions had been received for the next issue of the *Blue Jay*, and the Regina Executive therefore offered to help Yorkton publish its "valedictory" number, marking the end of the seven-year period during which it had kept its friendly little bulletin alive. Beyond this immediate assistance, there was disagreement in the Regina Society on the form and extent of aid to be given the *Blue Jay*, for some members of the Executive felt that the Regina Society did not have adequate financial or personal resources to publish a bulletin, and that such over-commitment of resources might lead to the breaking-up of the Society. Accordingly, it was urged that support should be sought not so much from the Regina Natural History Society as an organization as from those of its members who were also subscribers to the *Blue Jay*. These persons and all other subscribers in the province should have a say in establishing policy for the bulletin, and even in the decision of whether to retain the name "Blue Jay". Therefore no commitments would be made in advance, said Dr. Ledingham in his letter of October 19 to Mr. Shaw, and policy matters would be left to members of the new organization.

Some thought had already been given, however, to the form the new

organization might take. Instead of relying upon the leadership of a single person as president, or even of a few persons in executive positions, Dr. Ledingham thought, it should draw upon all those people active in natural history, biology or conservation perhaps through having a special category of members known as fellows or directors with special responsibility for the continuance of the *Blue Jay*. While a friendly, informal association of members should be maintained, some formal status had to be given the Society, with incorporation under the Benevolent Societies Act, provision for levying fees and receiving donations, the naming of any officers needed to act for the Society, as well as the formulation of a constitution.

At first the membership fee contemplated was a modest 50 cents, and in retrospect it seems a courageous gesture for the Society to have considered paying an editor \$100 with a paid-up membership of only 133! The policy of a low membership fee has been retained over the years by the Saskatchewan Natural History Society with the intention of making membership open to all sincerely interested persons.

The final issue of the *Blue Jay* as the official organ of the Yorkton Natural History Society was published late in 1948, and it included an announcement that an open meeting would be held in Regina to discuss the formation of a provincial society, and a questionnaire seeking to ascertain members' interests in natural history. The questionnaire was taken seriously, for members realized that the very future of the bulletin depended on their response. Over 90 replies were received from the current membership of 133. The largest number of these gave their special interest as birds and mammals, but many added plants, or insects, or Indian artifacts and archaeology, or geology, or taxidermy,



Cliff Shaw

and a considerable number of more catholic tastes stated their interest in "any" or "all" aspects of natural history! When asked for suggestions on how to handle material, readers recommended more sketches and photographs, more help for students and beginners, contributions from authorities in special fields, but also full use of all notes received from amateurs, a non-technical approach that would be at once simple and personal, more reviews of books, and so on. Some people, however, simply said: "I like the *Blue Jay* as it is."

Suffice it to say that the interest shown by the returned questionnaires justified the calling of a meeting to form a provincial society, and the date was set for January 24 in Regina.

The old Regina College on Scarth Street, at 8:00 p.m. on a Saskatchewan winter evening when the January cold draws people indoors, was the setting for the institution of the new society. Present at this founding meeting on

January 24, 1949, according to the Society's minutes, were the following members: Cliff Shaw from Yorkton, Leonard Dreger from Lang, Dr. G. F. Ledingham, Fred G. Bard, Mr. and Mrs. Dick Bird, Miss E. Barker, Fred Lahrman, Mr. Scott, William Whitehead, L. T. Carmichael, Fred S. Robinson, W. A. Brownlee and James Gerlitz from Regina.

Dick Bird and Cliff Shaw made the operative motion that a provincial natural history society be organized, and it was decided that the aims of the Society would be "to publish the *Blue Jay* and to foster an active interest in natural history." Though expanded into a more elaborate statement in later revisions of the Society's constitution, these simple aims still constitute the basic objectives of the Saskatchewan Natural History Society.

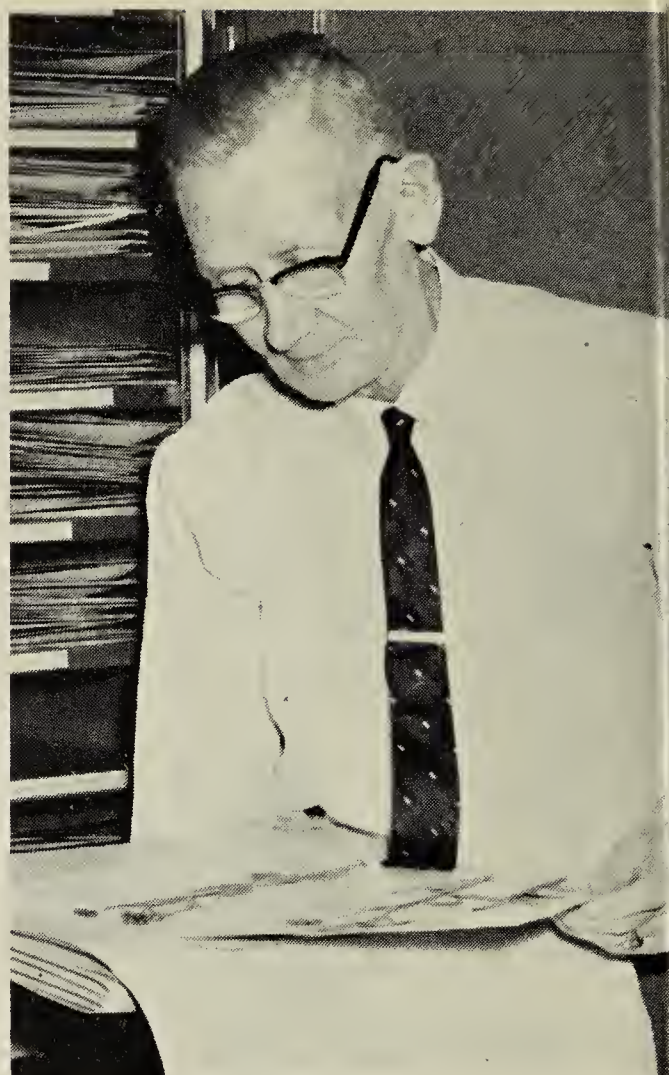
By a second motion, the name of "The Saskatchewan Natural History Society" was approved, and subsequent motions established officers and directors and appointed Lloyd Carmichael as Editor-in-chief with an annual honorarium of \$100.00. The Yorkton Natural History Society sanctioned the release of the 25 cents of the 50-cent subscription-membership fee which had previously gone to the Yorkton Society to finance its operations, and thus the formal connection between the *Blue Jay* and its first sponsor was terminated. The annual fee for membership in the new society was set at \$1.00, this fee to include a one-year subscription to the *Blue Jay*. Fred G. Bard, Director of the Provincial Museum, offered mimeographing services to the value of \$100, to meet half the cost of printing the *Blue Jay*.

The provisional executive named to serve until a members' meeting could be called to ratify a constitution and formalize the formation of the society, included Dr. George F. Ledingham of Regina as president, Cliff Shaw of

Yorkton as first vice-president, Maurice G. Street of Nipawin as second vice-president, William Whitehead of Regina as secretary-treasurer, and Lloyd T. Carmichael of Regina as editor. In addition, 12 directors were named at this meeting and a subsequent executive meeting, and their names appeared on the masthead of the next issue of the *Blue Jay*: H. C. Andrews (Principal of the Normal School, Moose Jaw), R. (Dick) Bird (Regina), E. W. Brooman (Prince Albert), A. C. Budd (Experimental Station, Swift Current), Judge L. T. McKim (Melfort), Lloyd Peterson (Indian Head), Stuart Houston (Yorkton), E. W. Van Blaricom, K.C. (Tisdale), R. J. Priestly (Regina), F. S. Robinson (Regina), W. A. Brownlee (Regina), and Fred G. Bard (Director of the Provincial Museum, Regina). Dean W. P. Thompson, President-Elect of the University of Saskatchewan, consented to be the first Honorary President.

It was agreed that the *Blue Jay* would be continued as a quarterly, and it was carefully stated that its subject matter would not be scientific, but would consist chiefly of actual field reports and observations of the members.

When we look back from the vantage point of 25 years, certain items from the early minutes and correspondence of the Society assume special significance. For example, it is of interest that an idea advanced by the Yorkton Natural History Society for an annual rally of all members at some central point of interest was realized six years later when the first summer meet was held at Fort Qu'Appelle. This activity of the Society, now a yearly event, encourages personal contacts among the members, particularly those who live distant from an organized local natural history club. Or again, in the light of later discussions of ways of cooperating



Lloyd T. Carmichael

with fish and wildlife organizations in the province, it is interesting that a letter from the Fish and Game League was read at the first meeting of the Executive, suggesting the possibility of the merging of the two organizations. The decision of the Executive to decline the offer for the time being, though agreeing to cooperate with the Fish and Game League in other ways, decisively influenced the future role of the Saskatchewan Natural History Society.

In March, 1949 the *Blue Jay* appeared for the first time in its new role as official publication of the Saskatchewan Natural History Society. The number carried Bob Priestly's expression of appreciation to those who were carrying on his wife's work. He wrote that from the time the *Blue Jay's* growth seemed a positive fact "it was Mrs. Priestly's belief that it should



George F. Ledingham

become the official organ of a society of wider scope. There was no provincial organization and the formation of one seemed unlikely, hence her approach to the Provincial Museum for joint sponsorship in September, 1945. That her one-time dream is about to become realized is a great source of satisfaction to our children and myself."

The next important step in the organization of the Society was the convoking of the first annual meeting in Regina on October 21 and 22, 1949. Rather ambitious plans were made for a two-day session combining the business meeting, concerned with adopting a constitution and electing officers, and an educational programme of films and talks. Through this meeting it was hoped to strengthen the Society and increase the

membership, for although "first-year enthusiasm" was still running fairly high in Regina, it was felt that people from other parts of the province were not giving the help expected of them.

At the business session, held on the evening of Friday, October 21, Dr. George Ledingham presided and W. A. Brownlee acted as secretary. Bill Whitehead, as secretary-treasurer of the provisional society, reported receipts of \$341.25 (including a carry-over of \$75.00 from Yorkton) and expenses of \$257.94 (including \$75.00 paid to the Editor). It was noted that with a subscription list of 383, the cost of each copy of the *Blue Jay* was 17 cents!

In the discussion of the draft constitution proposed by Fred Robinson and Dr. Ledingham, the most lively

item was the question of the Society's name. The name of "Saskatchewan Nature Club" suggested in the draft constitution met with considerable resistance, and a motion was made to change it to "Saskatchewan Natural History Society." A further motion, recorded in the minutes as carried, proposed submitting a list of suggested names to all members of the Society through the *Blue Jay* and asking them for further proposals. However, when the next *Blue Jay* appeared, the question of the Society's name was not raised, and the constitution printed in the bulletin simply stated that "the name of the Society shall be 'The Saskatchewan Natural History Society'." Although this designation has been retained for 25 years, a number of attempts have been made during that time to re-open the question of the Society's name.

The Annual Meeting asked the officers of the provisional society to carry on for the year 1949-50; thus President W. P. Thompson remained as Honorary President, Dr. Ledingham as President, C. Shaw as

First Vice-President, and Maurice Street as Second Vice-President. In addition, there were five "executive members" from Regina — Fred Robinson, Fred Bard, Dick Bird, Bill Brownless, Bill Whitehead, and 15 directors (as required by the new constitution) who were given one, two and three-year terms — E. W. Brooman (Prince Albert), H. C. Andrews (Moose Jaw), Judge L. T. McKim (Melfort), E. W. Van Blaricom (Tisdale), A. C. Budd (Swift Current), L. T. Peterson (Indian Head), R. J. Priestly (Victoria), C. S. Houston (Yorkton), R. C. MacKenzie (Regina), W. Yanchinski (Naicam), A. Ward (Burnham), A. McPherson (Saskatoon), Mrs. Marion Nixon (Wauchope), Mrs. J. Hubbard Jr. (Grenfell), R. P. Stueck (Abernethy).

Thus formal status was given to the organization that had come into being informally on January 24, 1949, in the small but enthusiastic gathering of persons prepared to make the personal commitment necessary for the formation of a provincial natural history society.



"... pond on the west road ..."

Stuart Houston

SOME OBSERVATIONS ON THE PASQUE-FLOWER

by G. F. LEDINGHAM and S. D. LARMOUR*

One of the commonest signs of spring in southern parts of the Prairie Provinces is the Pasque-flower. Though the plant is commonly known as the crocus, this is not a good name because the word "crocus" properly refers to the Autumn Crocus (genus *Colchicum* in the lily family) or Crocus (genus *Crocus* in the iris family). Unlike the Crocuses, which are Monocotyledons, the Pasque-flower belongs to the Dicotyledons in the genus *Anemone* in the crowfoot or buttercup family. The origin of the name Pasque-flower is of some interest too, referring as it does to the centuries-old observance of a religious ceremony symbolizing the renewal of life in the spring.

The Pasque-flower is widespread in the northern parts of Europe, Asia and North America. It is a perennial with several flowers and leaves coming up each year from an underground stem. The flower buds appear early in the spring and one of the joys of spring as the snow starts to disappear is to walk over the dull brown prairie and see the soft hairy buds of the Pasque-flower. These buds, which appear before any sign of leaf, gradually enlarge until, on the first warm spring day when the temperature is about 50°F., the prairie may be thickly dotted with clumps of bright 2 to 3-inch flowers. Botanically speaking, the flowers have no petals but the sepals are large and showy. The sepals are usually a rich purple color on the outside but they are nearly white within. The dark outer side absorbs light and heat, but the light inner side reflects the sun's energy to create a microclimate somewhat warmer and more attractive to the insects who come to feed and, incidentally, to cross



Normal Pasque-flower G. F. Ledingham

pollinate the flowers. As the sun descends and the day cools, the sepals come together again and many insects are trapped and protected overnight. The Pasque-flower is generous and produces much pollen to reward the hardy pollinators who venture out in early spring to cross pollinate and help maintain the rich variability usually found in native plants.

When the Pasque-flowers are fully open, it is an easy matter, on a warm spring day, to run over short grass prairie looking down into the flowers to see if the bees and other insects are at work and to note the number of sepals on each flower. We know that the number is not constant. (Moss in *Flora of Alberta*, 1959, gives the range as five to seven). We took time one day to make a count in half a dozen different pastures in or near the Qu'Appelle Valley, 20 miles north of Regina. The great majority of flowers (over 95 per cent) had six sepals but some had five or seven and usually these odd flowers were in clumps in which the rest of the flowers had six sepals. We were, of course, not able to decide in our rather random

*Biology Department, University of Saskatchewan, Regina, Saskatchewan.

counting of some thousand clumps if any plant had a true genetic difference in number of sepals. It seemed to us that the variation in sepal number was developmental, for we assumed that a clump of closely associated flowers was always just one plant. We resolved to look another day at other populations of Pasque-flower but the 1972 flowering period ended before we again found time to look at plants of our native grasslands.

From time to time people report a clump of pure white Pasque-flower but we have never seen what must be a rare variation. We did, however, note some variation in the colour of Pasque-flowers. One such flower was a delicate pink, and because the flower stood alone we can assume that it was a young plant which had been able to produce only one flower. A few flowers seemed to be blue rather than purple and we wondered if they, too, are the result of a genetic variation. It would be interesting to know whether anyone has studied the inheritance of flower colour in the Pasque-flower.

Early in the spring of 1972, Mr. W. Anderson, 3617 Victoria Avenue, Regina, phoned and asked if I (GFL) would like to see a double "crocus." I was naturally eager to do so and together we went out on Highway No. 6 to the Qu'Appelle Valley and then turned west along the valley road. On a grassy bank just above the road Mr. and Mrs. Anderson showed me the interesting Pasque-flower variation shown in the accompanying photo. There were five flowers in the clump and all of them showed the same anomalous development of many petal-like structures. There was no sign of the stamens or rich yellow pollen which are so conspicuous in normal Pasque-flowers. Apparently some genetic variation had changed all the stamens into sterile purple petaloid structures. The Andersons explained that this was now the fourth year that they had been coming to this exact spot to visit and admire this unusual flower. Unfortunately, however, it will be impossible for them to do so in the future because "improvement" of the valley road has destroyed the area.



Double Pasque-flower.

G. F. Ledingham

CAREX MARITIMA Gunn., AN ADVENTIVE SEDGE AT THE PAS, MANITOBA

by WILLIAM J. CODY* and WALTER KRIVDA**

Carex maritima is an arctic circumpolar species which characteristically occurs along sandy seashores. Thus, in North America it is found adjacent to the coasts of the arctic islands, along the arctic coast, the shores of Hudson and James Bays and south along the Labrador coast to Northern Newfoundland where it is found on turfy limestone barrens.

Inland populations are quite rare and scattered and usually in sandy situations. On this continent these stations are only in the west: in the Brooks Mountain Range in Alaska, in the Ogilvie Mountains of Yukon and Alaska, at Lake Athabaska in Saskatchewan, in the Banff region of southern Alberta, near Edmonton, Alberta, and in the mountains of Colorado. Some of these inland collections, as well as the one from York Factory mentioned below, have been referred to *C. maritima* var. *incurviformis* (Mack.) Boivin (*C. incurviformis* Mack.) by Bernard Boivin (personal communication). A map depicting the circumpolar range of the species is given by Hultén¹.

In Manitoba the only localities reported by Scoggan are from coastal situations at York Factory and Chur-

chill². Indeed, it has been collected many times at the latter locality where it is sometimes quite robust in stature.

A new site has just been discovered at The Pas, Manitoba, about 400 miles SW of Churchill, near the Saskatchewan border. Here *Carex maritima* would appear to be an adventive, presumably carried in by the railroad. A single clone about one foot in diameter was found almost hidden in gravel; only the fruiting heads and upper parts of the leaves were protruding, and these were not observed until after rain. Data are as follows: *Manitoba*: The Pas, along railway in gravel, W. Krivda s.n., 8 June, 1973 (DAO and personal herbarium of W. Krivda).

Carex maritima often forms extensive mats, with ascending tufts of leaves arising from deeply buried cord-like rhizomes; the generally arching culms which barely overtop the leaves may be low-growing or ascend to over 20 cm in height; the fruiting head consists of several tightly packed spikes of which the terminal one is inconspicuously staminate at the tip; the ovate and bluntish pistillate scales are brown with broad thin pale margins, and are exceeded by the divergent membranaceous subinflated perigynia. The var. *incurviformis*, which is doubtfully distinct, is reputed to have less inflated and somewhat nerved perigynia, and the scales lanceolate-

Biosystematics Research Institute,
Central Experimental Farm,
Ottawa, Ontario, K1A 0C6

*P.O. Box 864,
The Pas, Manitoba.

ovate and only narrowly hyaline-margined.

Figure 1 depicts the plants collected at The Pas.

¹HULTÉN, E. 1968. *Flora of Alaska and Neighboring Territories*. Stanford University Press, Stanford, Calif. 1008 pp.

²SCOGGAN, H. J. 1957. *Flora of Manitoba*. National Museum of Canada Bulletin 140: 1-619.



Figure 1. *Carex maritima* collected by W. Krivda at The Pas, Manitoba.

INSECTS INVADE AN URBAN POOL

by E. A. DRIVER*

Most of us are familiar with the dramatic migrations of the Monarch Butterfly (*Danaus plexippus*) from British Columbia to southern California or the Desert Locust (*Schistocerca gregaria*) which migrates for thousands of miles in the Middle East during the dry seasons. Closer to home, many poorly known aquatic as well as terrestrial insects move from one habitat to another for a variety of reasons. These movements may be as short as several hundred feet or as long as 50 miles. Unfortunately, few migrations are observed. Many insects are not noticed because they are drab or dark coloured or small and so we may fail to appreciate this phenomenon.

Many aquatic insects can travel against the wind while others are transported on strong winds. Wind influences the direction of travel but the duration of flight (migration) is controlled by the insect.

Aphids, mosquitoes, butterflies and other insects begin to migrate soon after they emerge from the nymph or pupa stage. Many will fly en masse from the emergence site to a new breeding area. Some fertilized female mayflies (*Hexagenia bilineata*) migrate 12 miles from river to lake¹. Aquatic insects are forced to migrate as ponds dry up.

There are several kinds of migration: migration away from the place of birth without return or migration to hibernation sites and return to similar breeding habitat (also see Johnson²). Aquatic insects par-

ticipate in both types of migration.

Many dragon- and damselflies begin migration immediately after emergence from the water. Whiteface dragonflies (*Leucorrhinia*) and the large Blue Darners (*Aeschna*) pursue an outward migration after the teneral stage (the teneral stage of an insect is the period immediately after the insect moults or emerges) and do not return to their natal site.

Several species of butterflies and mosquitoes display the second type of migration, for example, the Monarch Butterfly and a mosquito (*Anopheles earlei*). This anopheline mosquito emerges from roadside ponds, flies several miles to overwinter in ground squirrel burrows and in spring finds a temporary pond to lay her eggs in.

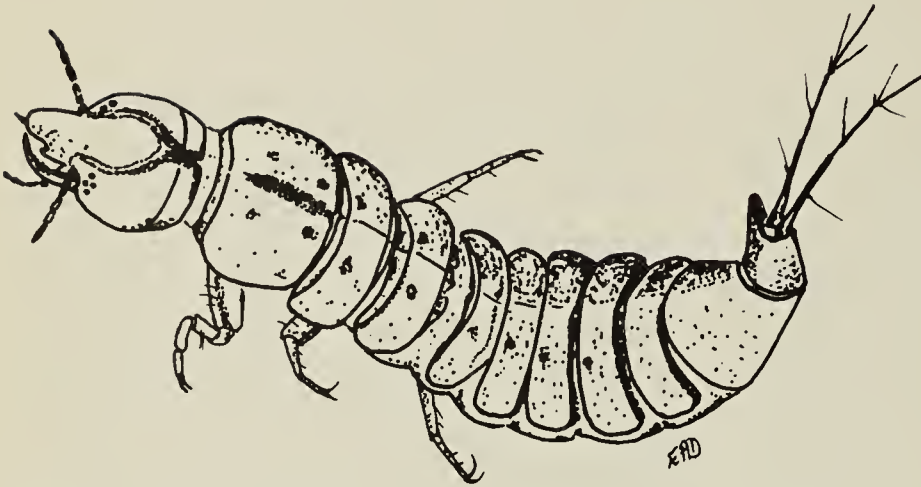
The following is an example of local insect migration in Saskatoon.

Our neighbor's unused swimming pool is bordered by Cut Leaf Weeping Birch (*Betula pendula gracilis*), Manchurian Elm (*Ulmus pumila*) and a large bed of Hansa Roses (*Rosa rugosa* hybrid). Leaves from these trees and shrubs combined with dust in the pool provided an excellent habitat for larval stages of aquatic insects. The litter varied from less than 6.3 mm (¼ inch) to 31.7 mm (1¼ inches) in depth. Water in the pool was maintained at a maximum depth of 122 cm (4 feet).

In the fall of 1972 several species of predaceous diving beetles (Dytiscidae) were noted in the pool. In August, 1973, after the pool had stood undisturbed for 4 months, I observed a large number of midge (Chironomidae) pupa exuvia (the

*22 Red River Road,
Saskatoon, Saskatchewan.

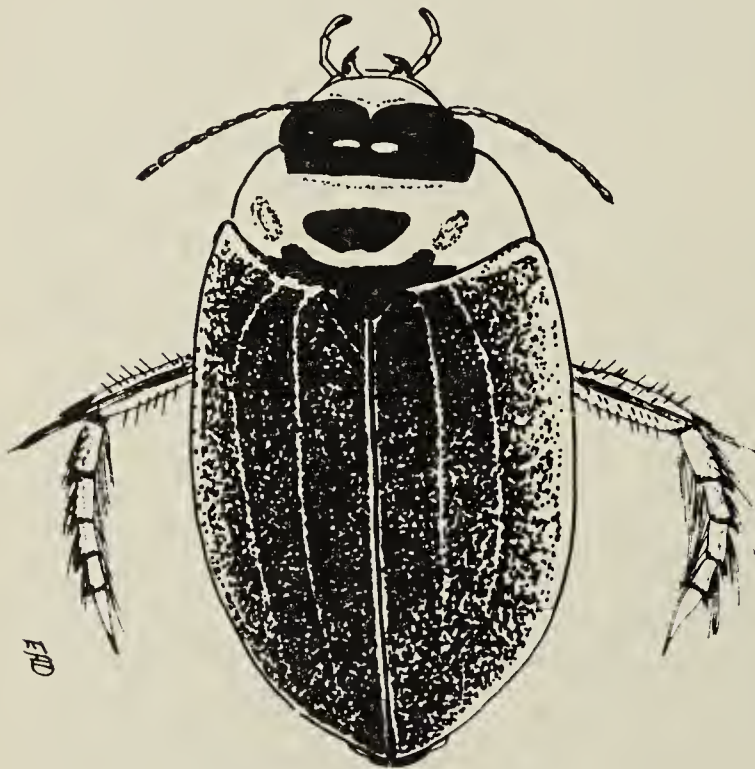
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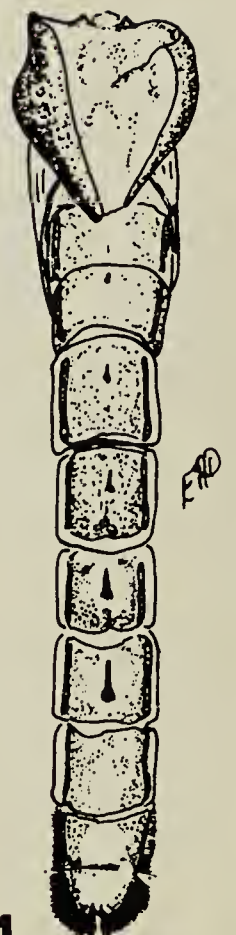
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Figure 1. Predaceous diving beetle larva, *Hydroporus* sp., length 5 mm

Figure 2. Caddisfly larva, *Phryganea cinerea*, case constructed from leaves and grass clippings, length 10 mm

Figure 3. Predaceous diving beetle, *Rhantus notatus*, length 8 mm

Figure 4. Pupa exuvia of the midge, *Phytotendipes barbipes*, length 6 mm



Figure 5. Head and thorax of an adult male water strider, *Gerris dissortis*, length 12 mm



Figure 6. Ventral view of an adult backswimmer, *Notonecta undulata*, length 12 mm



Figure 7. Frontal view of a predaceous diving beetle, *Rhantus notatus*, length 8 mm

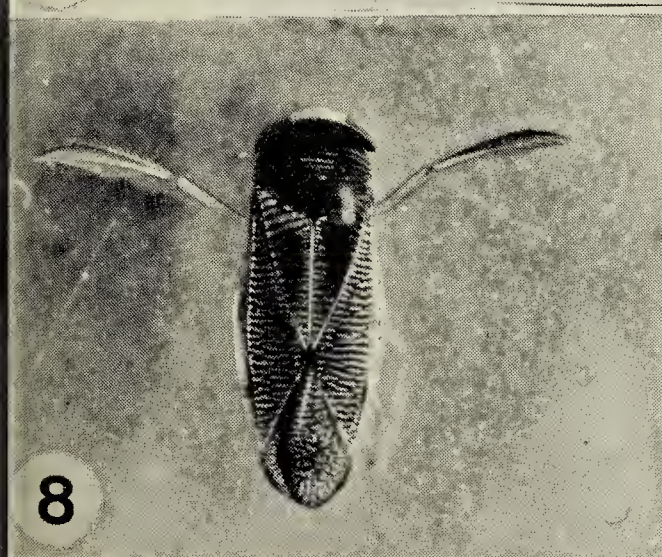


Figure 8. Female water boatman, *Callicorixa audeni*, length 6 mm

outer layer of skin of the pupa) floating at the surface of the pool. At this point I sampled the pool using a sweep net to determine how many species of invertebrates were present.

The pool was inhabited by dragon- and damselflies (Odonata), bugs (Hemiptera), beetles (Coleoptera), caddisflies (Trichoptera), mayflies (Ephemeroptera), flies and midges (Diptera), bees (Hymenoptera) and aphids (Homoptera). Twenty-eight of the 33 species collected (Table 1) are common in prairie potholes or sloughs and some are capable of coping with flowing water, for example, the mayfly (*Ephemera*) and the dragonfly (*Aeschna i. interrupta*).

The swimming pool is located 0.32 km (0.2 miles) northwest of the South Saskatchewan River, 0.48 km (0.3 miles) southeast of a temporary pond, 1.92 km (1.2 miles) southeast of a semipermanent pond, and 2.24 km (1.4 miles) east of Hudson Bay Marsh at the Saskatoon Airport. Many of the aquatic insects, therefore, emerged within easy migrating distance of the swimming pool. These insects, along with the bees and aphids, were likely attracted by the reflection of the water surface. The water striders, waterboatmen, beetles, caddisflies, mayflies (*Callibaetis*), midges and phantom midges migrated in early summer and produced at least one generation in the pool.

Table 1. Insects collected from a swimming pool in Saskatoon, Saskatchewan.

| <i>Species</i> | <i>Life stages</i> |
|---|---|
| Dragon- and damsel-flies (Odonata) | |
| <i>Aeschna i. interrupta</i> | Adult female drowned |
| <i>Lestes disjunctus</i> | Adult female attempting to deposit eggs on side of pool |
| Water striders (Hemiptera) | |
| <i>Gerris dissortis</i> | Adult male standing on water |
| <i>Gerris buenoi</i> | Adult female and nymphs skating on water |
| Backswimmer (Hemiptera) | |
| <i>Notonecta undulata</i> | Adult male swimming |
| Water Boatmen (Hemiptera) | |
| <i>Corisella taralis</i> | Adult female feeding on algae on side of pool |
| <i>Trichocorixa</i> sp. | Adult female swimming |
| <i>Callicorixa audeni</i> | Adult female and nymphs swimming |
| Water scavenger beetles (Coleoptera) | |
| <i>Tropisternius lateralis numbatus</i> | Adult male swimming |
| Whirligig beetles (Coleoptera) | |
| <i>Gyrinus maculiventris</i> | Adult swimming on water surface |
| Predaceous diving beetles (Coleoptera) | |
| <i>Rhantus notatus</i> | Adult female swimming |
| <i>Agabus bifarius</i> | Adult female swimming |
| <i>Hydroporus</i> sp. | Nymph swimming |
| <i>Helophorus oblongus</i> | Adult swimming |
| <i>Helophorus</i> sp. | Adult swimming |
| <i>Hygrotus patruelis</i> | Adult swimming |
| <i>Hydrovatus</i> sp. | Adult swimming |
| Caddisflies (Trichoptera) | |
| <i>Phryganea cinerea</i> | Larva crawling on litter at bottom of pool |
| Mayflies (Ephemeroptera) | |
| <i>Callibaetis</i> group | Adult female and nymph exuvia at water surface, nymphs swimming |
| <i>Ephemerella</i> | Adult female on water |
| Midges (Diptera; Chironomidae) | |
| <i>Phytotendipes barbipes</i> | Pupa exuvia floating on water, larva crawling in litter at bottom of pool |
| <i>Tanytarsus</i> sp. | Adult female and pupa exuvia on water |
| <i>Psectrotanypus guttularis</i> | Larva feeding in litter and pupa exuvia floating on water |
| <i>Psectrocladius barbinanus</i> | Adult male partially emerged from pupa exuvia at water surface |

| | |
|-------------------------------|---|
| <i>Acricotopus nitidellus</i> | Adult male and pupa exuvia at water surface |
| <i>Cricoptus</i> sp. | Adult male and female and pupa exuvia |
| <i>Corynoneura</i> sp. | Larva living in litter at bottom of pool |

| | |
|--------------------------------------|-----------------|
| Phantom midge (Diptera; Chaoboridae) | |
| <i>Chaoborus americanus</i> | Larvae swimming |

| | |
|--------------------------------------|----------------------------|
| Bees (Hymenoptera) | |
| <i>Bombus</i> sp. (bumble bee) | Adult drowned |
| <i>Apis mellifera</i> (honey bee) | Adult wet on water surface |

| | |
|--|------------------------------|
| Aphids (Homoptera) | |
| <i>Rhopalosiphum maidis</i> (Corn Leaf Aphid) | Adult males sitting on water |
| <i>Macrosiphum dirhodum</i> (Rose Grass Aphid) | Adult males sitting on water |
| <i>Macrosiphum avenae</i> (English Grain Aphid) | Adult males sitting on water |

Two interesting facts were gleaned from the swimming pool. First, a moderately barren habitat, lacking rooted aquatic plants, was able to support a diverse aquatic insect community and, secondly, this community was more complex than those I have studied in some natural wetlands. Ponds that hold water for 4 to 15 weeks near Floral, Saskatchewan, had an average of 10 species of aquatic insects with a range of 5 to 24 species per pond. The total for 10 temporary ponds was 28 species. (These totals may be low because species could have been missed during sampling.) More permanent ponds in the same area support aquatic insect communities in excess of 70 species.

A HOME PROJECT

Anyone can place a tub or pail filled with water in the backyard, visit the "pool" weekly and record the number and kinds of insects. A dugout or pond serves the same purpose. Collecting and preserving one or more of each kind of insect you find may be the best

way to keep track of how many kinds appear in your "pool". A seive or dip net is as good as anything for collecting. Preserving insects is more complicated. You may wish to use one vial for each kind of insect or put them all in one or more larger bottles. Rubbing alcohol or formaldehyde, available from either a drugstore or hardware, will keep your collection in life-like condition for years.

To check the direction of migration, an old storm window can be set up on each side of a dugout. A small tray filled with a soap solution at the base of each side of a window will catch insects which strike it and give an indication of what direction they are moving.

To identify many of the insects, "*A field guide to the insects*" by D. J. Borror and R. E. White (1970), part of the Peterson Field Guide Series, is very useful. Other books can be obtained through a local library.

I wish to thank Ulrich Hochwald for

photographing the insects and Maurice Taylor, Canada Department of Agriculture, Saskatoon, for identifying the aphids.

¹BURKS, B. D. 1953. *The mayflies or Ephemeroptera of Illinois*. Natural History Survey, Urbana, Illinois. 216 pp.

²JOHNSON, C. G. 1969. *Migration and dispersal of insects by flight*. Methuen and Company, Ltd., London. 763 pp.

Students wishing a copy of this paper may obtain it by writing the author.

A WHITE-BANDED DAY SPHINX MOTH — NEW TO MANITOBA

by WALTER V. KRIVDA*

In sorting and arranging a twenty-five year collection of Sphinx moths in the writer's collection at The Pas various new records for the province are being discovered.

The present, apparently unique specimen for Manitoba was collected in the southeastern part of the province at Brokenhead, Manitoba June 6, 1954, Dan Mosquin, collector. It is somewhat worn showing distant migration. The specimen is somewhat on the small side and likely is of the first generation.

The White-banded Day Sphinx Moth is common in southern Florida and native throughout South America. Previous migrant records are known as far north as Massachusetts, New York, Michigan and Missouri, but this is the first record for Manitoba.

*Keewatin Community College,
P.O. Box 300,
The Pas, Manitoba.
R9A 1M7



White-banded Day Sphinx Moth.

Ted Tadoa

OFF INTO THE WET GREEN YONDER: BIRDS AND PLANTS OF A BOREAL BOG

by ANTHONY J. ERSKINE*

Each year my studies take me into Canada's north woods, where I investigate the kinds and numbers of birds occupying representative habitats. As I move westward year by year, the forest birds remain much the same, but the wetland birds show striking changes. In 1973, a muskeg off the Dore Lake road, in central Saskatchewan, provided enough excitement to compensate for the effort necessary to get around in it.

From the road there was no sign of a bog. The jack pine-clad sandhills blocked off the view westward, and a low black spruce forest stretched away beyond the pond to the east. The map told us a muskeg lay there, so we followed an old trail off through the spruces. The ground rapidly became spongy underfoot and we had to adopt a slow, moose-like gait, each foot lifted out of the clinging moss in turn and placed in again farther on, without haste. Waders were a necessity, not for deep water but because of the splashes that would quickly soak one above lower boots. Here the spruces had given way to lichen-draped tamaracks. Only a few twigs on each tree showed the new green of fresh needles amid the gray and gray-green and buffy pendants of the lichens, which swathed trunk and branch alike. Within a quarter-mile, the muskeg opened to the north through the trees. Now the tamaracks were farther apart, and gave



A. J. Erskine
Closed tamarack stand.

way to a green sedge meadow with clumps of dwarf birch, all standing in water.

On May 22-23 we marked out a study plot in the western part of the bog. During the next 7 weeks I surveyed this area nine times. Birds were my chief interest, but I also took note of the more striking plants. On the last two surveys I listed all the plants found on 21 sample areas uniformly scattered over the study plot. The

*Canadian Wildlife Service,
Ottawa, Ontario.



Open bog.

A. J. Erskine

numerical results are summarized and discussed below.

Description of the study area: Size - 52 acres (21 ha). The western third is an open stand of tamaracks, mostly 2 to 3 inches in diameter and 10 to 15 feet tall, with about 15% of black spruces of similar size intermingled. The eastern part is a wet sedge meadow with scattered dwarf birches up to 2 feet high. The intervening area has widely scattered tamaracks and denser shrub cover of dwarf birch and leatherleaf. Here and there in the open areas are firmer ridges rising a foot or so above water level, supporting black spruce and tamarack cover comparable to that of the western part. Tree density overall averages about 320 trees per acre, counting only those 2 inches in diameter or larger, but the western third probably averages about twice this figure while the eastern part is virtually treeless. Plant species identified on the plot are listed in Table 1, with their frequency of occurrence in the vegetation samples.

The bird census: Coverage - May 29, 31; June 4, 7 and 11, 13, 22, 24, 29 and July 7; nine complete surveys, totalling about 29 hours. Skies were cloudy on all but two surveys, with drizzle on three visits. Winds were force 3

(Beaufort scale) or less except briefly on two surveys. Temperatures ranged between 43° and 84°F during the surveys. The estimated numbers of pairs, singing males, broods, or territories of the birds found are shown in Table 2.

Remarks: This bog differed both in vegetation and birds from others I have surveyed in past years. Unlike all the others, this bog was based on mosses other than the usual peat-moss. Peat-mosses were scarce and largely confined to the drier areas, where black spruce occurred with cloudberry and bog laurel. Most of the plants (other than mosses and sedges) will be familiar enough to require little comment, but the swamp-pink deserves special mention. This showy, deep pink orchid is not even listed by most floras as occurring in Saskatchewan. It was first collected in this province near Lake Athabasca in 1962 by George Argus, who tells me that it should be anticipated in suitable habitats (such as this one) across the northern half of the province. It was scarce here, as I found only five plants, all within about 20 yards of each other, by one of the spruce ridges along the edge of the open area.

The variety of water and shore birds in this bog was much greater than in others I have studied. I found no nests,

Table 1. Plant species identified in bog south of Dore Lake, Saskatchewan, 1973.

| Species | Number of samples with species | |
|---|--------------------------------|-----------|
| | Present | Important |
| (a) Trees and shrubs (21 one-tenth acre samples) | | |
| Tamarack (<i>Larix laricina</i>) | 18 | 12 |
| Black spruce (<i>Picea mariana</i>) | 8 | 2 |
| Bog willow (<i>Salix pedicellaris</i>) | 16 | |
| Hoary willow (<i>Salix candida</i>) | 1 | |
| Dwarf birch (<i>Betula pumila</i>) | 21 | 11 |
| Leather-leaf (<i>Chamaedaphne calyculata</i>) | 5 | 2 |
| Labrador tea (<i>Ledum groenlandicum</i>) | 3 | |
| (b) Mosses, herbs, etc. (21 1-m ² samples) | | |
| Mosses | | |
| Peat-mosses (<i>Sphagnum</i> spp.) | 4 | 3 |
| <i>Drepanocladus</i> sp. | 12 | 8 |
| <i>Aulacomium palustre</i> and <i>Tomenthypnum nitens</i> | 12 | 11 |
| <i>Hypnum crista-castrensis</i> | 1 | |
| Sedges and cotton-grasses | | |
| <i>Carex chordorrhiza</i> | 2 | |
| <i>C. interior</i> | 2 | |
| <i>C. lasiocarpa</i> | 8 | 4 |
| <i>C. limosa</i> | 5 | 1 |
| <i>C. prairea</i> | 12 | 8 |
| <i>C. tenuifolia</i> | * | |
| <i>Eriophorum angustifolium</i> | 4 | |
| Other plants | | |
| Water horsetail (<i>Equisetum fluviatile</i>) | 6 | 6 |
| Arrow-grass (<i>Triglochin maritima</i>) | 8 | |
| Three-leafed solomon's seal (<i>Smilacina trifolia</i>) | 3 | |
| False asphodel (<i>Tofieldia glutinosa</i>) | * | |
| Swamp-pink (<i>Arethusa bulbosa</i>) | * | |
| Northern green orchid (<i>Habenaria hyperborea</i>) | * | |
| Pitcher plant (<i>Sarracenia purpurea</i>) | 4 | |
| Round-leafed sundew (<i>Drosera rotundifolia</i>) | 1 | |
| Marsh cinquefoil (<i>Potentilla palustris</i>) | 7 | |
| Cloudberry (<i>Rubus chamaemorus</i>) | 1 | |
| Bog rosemary (<i>Andromeda polifolia</i>) | 18 | 5 |
| Bog laurel (<i>Kalmia polifolia</i>) | 2 | |
| Small cranberry (<i>Vaccinium oxycoccus</i>) | 6 | |
| Cowberry (<i>Vaccinium vitis-idaea</i>) | 1 | |
| Bog-bean (<i>Menyanthes trifoliata</i>) | 18 | 1 |
| Small bladderwort (<i>Utricularia intermedia</i>) | 2 | |
| Swamp lousewort (<i>Pedicularis parviflora</i>) | * | |

*Species not found in samples, but seen elsewhere on plot.

but breeding could often be inferred from the frantic alarm calls of the parents. The shorebirds in particular often escorted me back and forth along the grid lines most of the way across the plot. Details are given below for those species of which the observations did not allow mapping of clear-cut territories.

Canada Goose: One bird on each of the first four visits, twice flushed from the plot; on June 4 it was seen on the ground to the east, skulking as if leading a brood.

Marsh Hawk: Single birds on June 4 and July 7, mobbed by smaller birds each time; not seen elsewhere within 15 miles of plot, so apparently associated with this habitat.

Kestrel: Once seen perched on the plot and once flying across, mobbed by Rusty Blackbirds both times; a Kestrel was seen regularly along the road 1/2 mile northwest, so this bog was probably included in its home range.

Sandhill Crane: Two birds were flushed twice from the plot, and heard bugling (in similar habitat) to the northeast on three other dates; a third was heard to the west (beyond the road) once.

Snipe: Up to four birds “sang” over or within earshot of the plot, and individuals were flushed occasionally; their activity areas were not discrete, but it seems unlikely that more than two pairs nested on the plot.

Solitary Sandpiper: Two birds were seen, expressing great agitation, on June 29. They escorted me back and forth, ranging over an area about 300 m. by 200 m. I judge that they nested elsewhere and had brought their brood to the plot since my previous visit; they had moved away before I returned on July 7.

Greater Yellowlegs: These probably nested on the plot, where they were seen from May 22. Only “song flights” and occasional agitated calling were noted until June 13, when the birds began to escort me around the plot. On succeeding visits this activity extended

Table 2. Estimated breeding bird population of muskeg study area south of Dore Lake, Saskatchewan, 1973.

| <i>Species</i> | <i>Pairs, males, broods or territories</i> |
|--------------------------|--|
| Canada Goose | + |
| Marsh Hawk | + |
| Am. Kestrel | + |
| (Sparrow Hawk) | |
| Sandhill Crane | + |
| Common Snipe | 2 |
| Solitary Sandp. | + |
| Gr. Yellowlegs | 1.5 |
| Less. Yellowlegs | 1 |
| Short-b. Dowitcher | + |
| Bonaparte's Gull | 1 |
| East. Kingbird | 1 |
| Tree Swallow | + |
| Gray Jay | 0.5 |
| Palm Warbler | + |
| Rusty Blackbird | 3 |
| Le Conte's Sparrow | 0.5 |
| Dark-eyed Junco | 1 |
| Chipping Sparrow | 2 |
| Lincoln's Sparrow | 2.5 |
| Total: 19 species | about 18 pairs |

Density: 35 pr./100 acres (86/km²)

+ = less than 0.5 territory.

far beyond the areas where the birds had formerly ranged. Presumably they later led their brood(s) away, as no birds were detected on the last two surveys.

Lesser Yellowlegs: As with the Solitary Sandpiper, these birds probably nested off the plot, and first appeared along its eastern edge on June 11. Their young likely hatched in the next week, as they first escorted me around the plot on June 22; this continued up to my last visit, but was then centred just off the plot to the east.

Short-billed Dowitcher: One bird appeared and objected to my presence, in the same restricted area, on June 22 and 24. Like the other shorebirds, it perched in the trees and called

repeatedly, though its excitement was expressed in less frenzied fashion than in the other species. These birds have been found breeding in Saskatchewan near Kazan Lake, about 75 miles to the northwest, and this record extends the known range.

Bonaparte's Gull: At least four adults were present, often one pair near each end of the plot, although all four were seen in flight together once. They "buzzed" me frequently, and sometimes were seen resting in tree-tops, the latter usually off the plot.

Tree Swallow: One bird sang over or just off the plot to the west on four dates and twice was seen perched there. Its activity area certainly included part of the plot, although no trees large enough for nest sites occurred there.

The other passerine birds were typical of this habitat and exhibited territorial behaviour, allowing the mapping of song posts of individual birds. Rusty Blackbirds were more difficult than other species, since these larger birds could be detected at great distances in this open habitat. The Eastern Kingbird, Rusty Blackbirds and junco were all near the north end of the plot, where ridges and clumps of trees provided a better interspersion of open and wooded areas, whereas all

Chipping Sparrows were in the western part. Lincoln's Sparrows occurred all along the edge between closed and open areas.

In summing up my impressions of this area, I must emphasize that the density of birds is very low, much lower than either in nearby forested areas or in marshes farther south. The variety, however, is quite impressive, and even the species which occurred only sporadically on such a small plot were easily detected in this open habitat. There must be few other areas, south of the Arctic tundra, with five species of (probably) breeding shorebirds. Some bird species reach the limits of their breeding ranges in such places, as do a number of plants, most of which, however, are less striking than the *Arethusa* orchid found here. The effort needed to get around in the muskeg habitat will deter many naturalists, but it offers rewards to those willing to plunge in.

I wish to thank R. Ireland and George Argus, respectively, for their help in naming the mosses and the flowering plants. Calvin Cuthbert helped in marking and measuring the plot.



Common Snipe.

Fred Lahrman

COLONIAL WATERBIRDS BREEDING AT JUNCTION RESERVOIR, SASKATCHEWAN

by A. R. SMITH*

In 1907 the eminent naturalist Arthur Cleveland Bent wrote of the impressive numbers of waterbirds he saw at Crane, Bigstick and other lakes in southwestern Saskatchewan during the summers of 1905 and 1906.¹ His accounts of large numbers of Eared Grebes and Franklin's Gulls breeding at Lake of the Narrows, colonies of Double-crested Cormorants, White Pelicans, and California and Ring-billed gulls at Bigstick Lake, and an enormous Western Grebe colony at Crane Lake are particularly interesting.

The devastating drought of the Thirties turned these lakes into dustbowls; they never really recovered, for the breeding grounds are now silent. Fortunately, the same drought that destroyed these breeding grounds helped to create new nesting habitat. The need for a reliable water supply for recreation, irrigation and domestic use led to the creation of several major reservoirs in the southwest. The large number of grebes, cormorants, pelicans, ducks, geese and gulls attracted to these new areas would perhaps even astonish Bent.

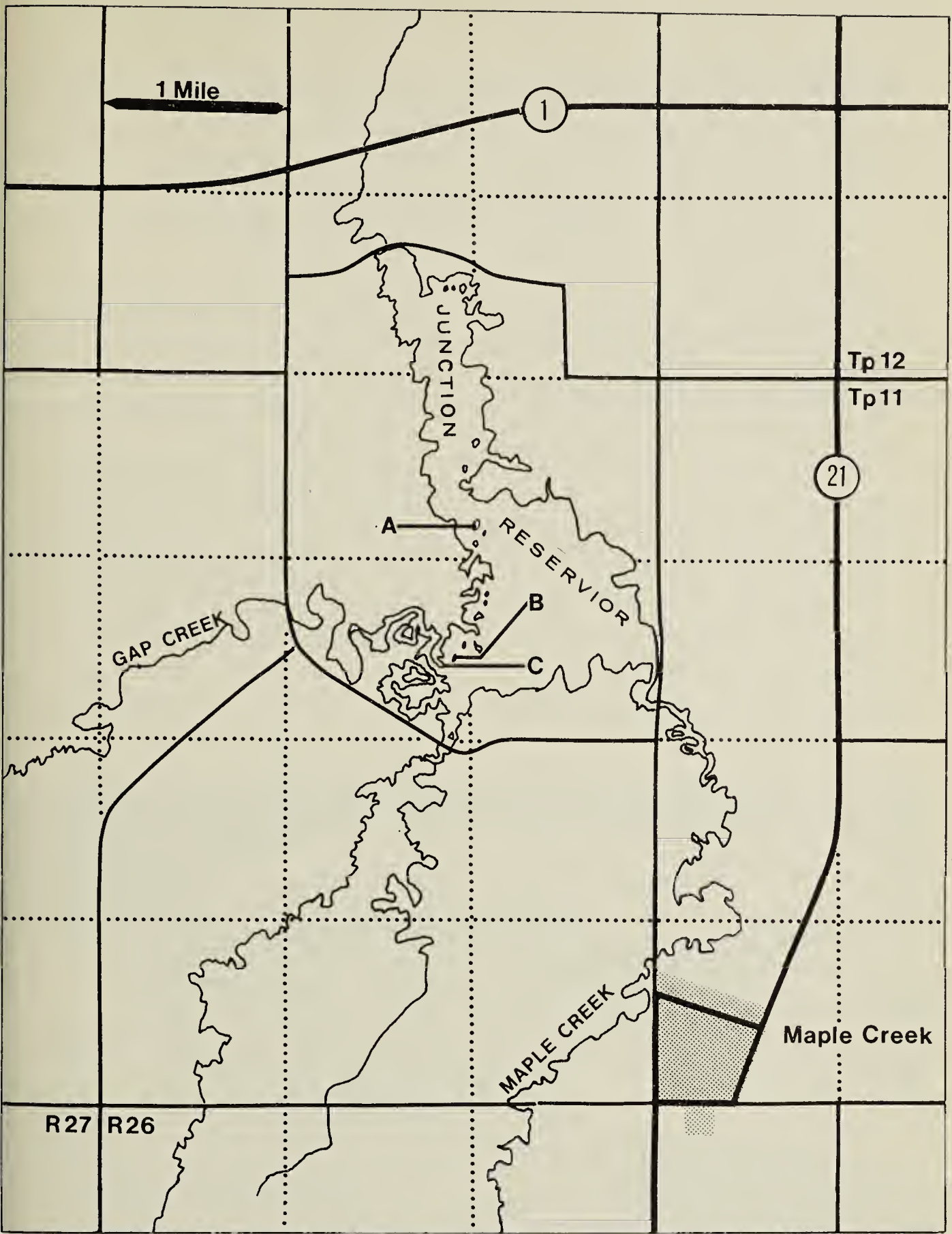
In the summer of 1972, I was a member of a Saskatchewan Department of Natural Resources banding crew; the project leader was biologist David S. Gray of Saskatoon. Our objective was to band flightless young and adult Canada Geese in the south-

western part of the province. On June 25 we banded 15 Canada Geese on Junction Reservoir near the town of Maple Creek. During my visit there, I made notes on several species of waterbirds which were nesting on the islands and shores of the reservoir.

Junction Reservoir was formed by a dam on Maple Creek 5 miles below the town of Maple Creek (Figure 1). It derives its name from the junction of Highways 1 and 21, 3 miles to the northeast. The water body is 2.5 miles long, and varies in width from 1.25 miles at the southern end to less than 0.25 miles at the central narrows. North of the narrows the reservoir is quite deep and practically devoid of aquatic vegetation. In marked contrast the southern end of the reservoir is relatively shallow and is choked with submerged aquatic vegetation (mainly water milfoil and green algae). Numerous islands and bays as well as the drowned channels of Gap and Maple creeks have created a haven for waterbirds.

The most conspicuous birds were the Double-crested Cormorants. They nested on a small island (A, Figure 1) about 75 yards across and located near the narrows. The island vegetation consisted of foxtail barley, pigweed, some rose and willow. About 105 cormorant nests were arranged in the form of a broad arc near the centre of the island. An additional 10 nests were found off one end of the arc. They were constructed of pigweed stems and

*Canadian Wildlife Service, Edmonton, Alberta



Junction Reservoir and vicinity.

varied in height from 6 to 18 inches. Exactly how many of the nests were occupied in 1972 (many nest sites are used and added to each year³) was unknown since most of the young had fledged. There were 140 young away from nests and 10 young as well as 20 fresh and 10 addled eggs in nests.

Some 800 adult California Gulls shared the island with the cormorants. Their young had fledged also. The nests were scattered along the periphery of the island leaving a buffer zone between nests of gulls and cormorants.

About 200 pairs of Ring-billed Gulls were found nesting on a peninsula (C, Figure 1) about $\frac{2}{3}$ mile south of Island A. As with the California Gull, many of the young had fledged. Interspecific competition with the preceding species appears to have forced the Ring-billed Gulls to forsake the comparative safety of Island A for a peninsula exposed to terrestrial predators. Vermeer in his studies of California and Ring-billed gulls nesting at Miquelon Lake in Alberta states that the California Gull is dominant over the Ring-billed Gull and therefore has its choice of nest sites.³

Twenty-five Common Tern nests were found on an islet (B, Figure 1) near the Ring-billed Gull colony. From one to three eggs were found in each nest; the average clutch size was 2.1 eggs. This is somewhat lower than the usual three², but incubation was so well advanced that the difference could be accounted for by predation and the fledging of young.

Forty-five pairs of Eared Grebes nested in the channel between Island B and Peninsula C. In contrast with the other colonial birds, which were fledging young, these birds were still laying eggs. Great Blue Herons, Canada Geese, several species of ducks and shorebirds filled out the complement of summer residents at Junction Reservoir.

On August 25, 1973, I returned to Junction Reservoir. Poor spring runoff and low summer precipitation had caused water levels on the reservoir to drop about 3 feet creating extensive mud flats. Islands (including Islands A and B) were turned into parts of the

mainland. When I checked the cormorant nests on Island A, I found that they contained the egg shells or dead young of the White Pelican, Double-crested Cormorant and an unknown species of gull, which indicated that these species bred in spite of the low water levels. Nesting success, however, was probably poor.

Human interference appeared to be at a minimum. The shallow waters and dense aquatic vegetation of the southern end of the reservoir effectively discourage boaters from landing on the nesting sites; access by road is equally poor. The major threat to the colonies appears to be fluctuating water levels which could destroy the nesting islands or expose them to the ravages of terrestrial predators such as coyotes and skunks. Because many colonial waterbirds breed in relatively few locations in the province, the continued existence of the colonies at Junction Reservoir is of great importance. The colonies of cormorants and pelicans at the reservoir are of particular importance since there are fewer than a dozen active colonies of each species remaining in the province.⁴

¹BENT, A. C. 1907. *Summer birds of southwestern Saskatchewan*. Auk 24:407-430.

²BENT, A. C. 1963. *Life histories of North American gulls and terns*. Dover Publications, New York.

³VERMEER, K. 1970. *Breeding biology of California and Ring-billed gulls*. Can. Wildl. Serv. Rep. Series 12. Ottawa.

⁴VERMEER, K. 1970. *Colonies of Double-crested Cormorants and White Pelicans in Saskatchewan*. Can. Field-Nat. 84:39-42.

⁵VERMEER, K. 1970. *Some aspects of the nesting of Double-crested Cormorants at Cypress Lake, Saskatchewan, in 1969; a plea for protection*. Blue Jay 28:11-14.

* * * *

In the marsh, long windy waves surge across the grassy sloughs, beat against the far willows. A tree tries to argue, bare limbs waving, but there is no detaining the wind. *Aldo Leopold. A Sand County Almanac.*

AN ALBINO BARN SWALLOW AND TWO ALBINO HOUSE SPARROWS

by WILLIAM J. MAHER*

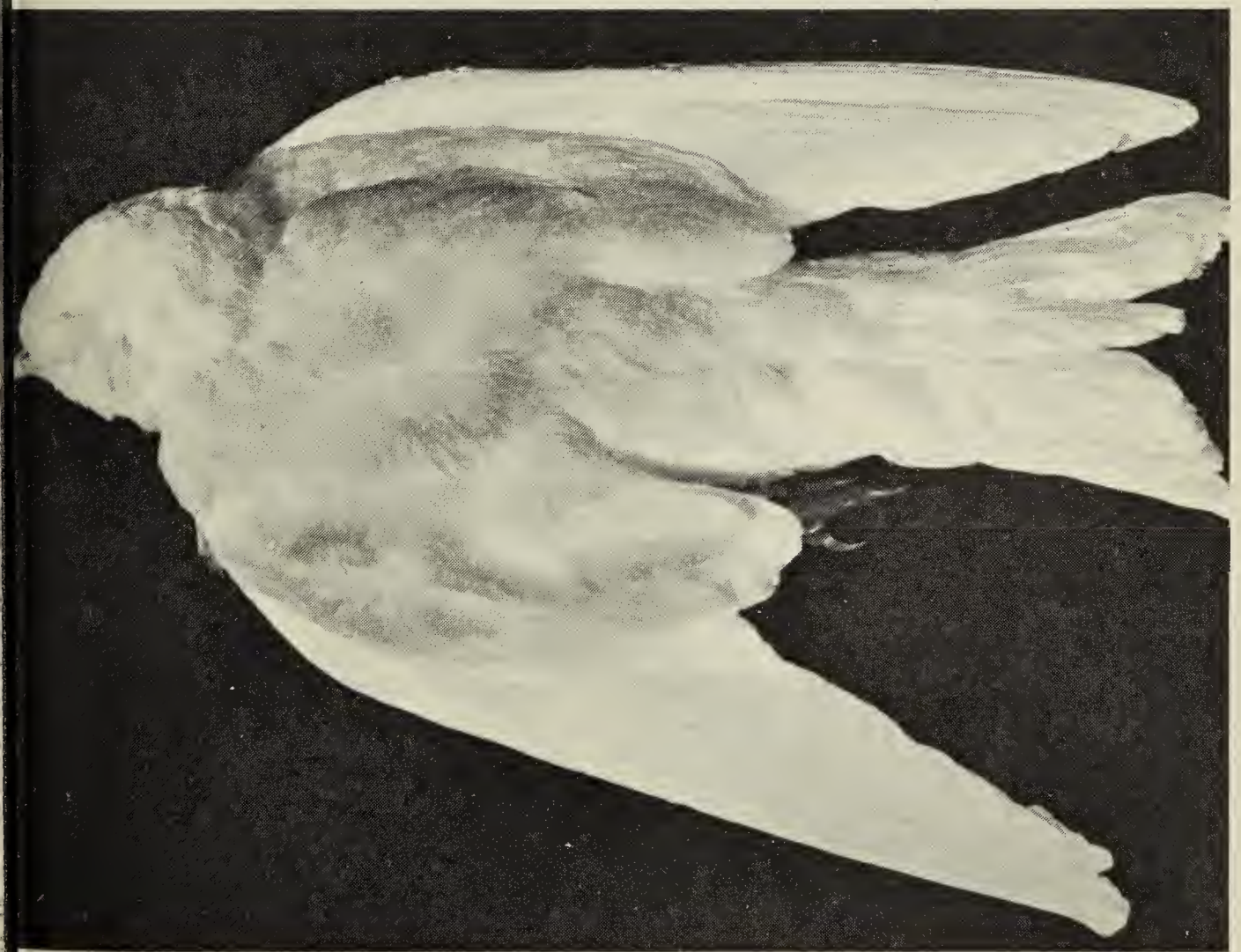
The purpose of this note is to describe an almost pure white juvenile Barn Swallow from Mozart, Saskatchewan, and to record a pale juvenile House Sparrow from Saskatoon and an albino House Sparrow at Langham.

Albinism is a conspicuous plumage abnormality of birds, usually of genetic origin, and albino individuals always excite interest. A true albino lacks all skin pigment and hence has

Dept. of Biology,
University of Saskatchewan,
Saskatoon, Saskatchewan.

white feathers and pale horn-coloured bill and claws. The bill, feet and eyes appear pink from underlying blood vessels. Many albinos have some traces of pigment and such individuals are more accurately termed pale or leucistic. Their colour can range from almost true albinism to a slightly pale version of the species' normal colour.

A pale Barn Swallow was sent to me by A. W. Cottam of Mozart on August 28, 1973. The bird was seen alone flying weakly and finally settled on a man's hand. It died shortly afterwards.



Albino Barn Swallow.

The bird is a juvenile, with the swollen, yellow corners of the mouth typical of nestlings. Its small size (wing 97.4 mm; tail 47.3 mm) suggests that it had recently fledged. It weighed only 11.6 grams.

The specimen (see photo) appears to be pure white; but closer inspection discloses that it is not. The areas which are cinnamon coloured on a normal Barn Swallow, the undersides, throat and forehead, are indeed pure white. All of the back behind the forehead, the wing and tail feathers, which are normally blue-black, are tinted tan or cinnamon. This pigment is unevenly distributed, the scapular (shoulder) feathers and wing coverts being darkest. Pigmentation in primaries and secondaries is light and is darker near the base of the vanes than peripherally. The tail feathers are also pale tan. The white tail spots of the normal swallow are evident but do not show in the photograph. The bill, tarsus and feet lack pigment and the pupil of the eye is pink but there is some dark pigment in the eyeball.

A pale juvenile House Sparrow was seen at about the same time that the Barn Swallow was received. It was in a large flock of juvenile sparrows on the University of Saskatchewan, Saskatoon Campus, on September 2. This bird was also not a true albino but was generally light in colour.

A completely albino House Sparrow was obtained from Langham in mid-November. It appears to be an adult. At least 29 records of albino or partly albino birds have been published in the *Blue Jay* (Table 1). There are 18 species in the list; 14 of them represented only once. Four species account for half of the records. They are the Robin, House Sparrow and Barn Swallow, with four records each, and the Crow with three records.

A. O. Gross¹² analysed 1,847 records of albino birds in North

America. His records show that, as in the records above, albinos are much more frequently reported in some groups than in others. The House Sparrow with 104 records (5.5% of total records) was second only to the American Robin with 152 records. Albinism is also common in the Barn Swallow as indicated by 25 records (1.4% of total records) of albino individuals. Thus, albino birds appear to be recorded on the prairies in roughly the same proportions as in all of North America.

Some of the records from the prairies are interesting for other reasons. Albino or partly albino individuals are readily noticed and individually recognizable and some have been seen for more than one season. They thus provide some interesting information on how long birds live in the wild. A partial albino male Red-winged Blackbird was seen near Regina for 5 successive seasons.¹⁵ A partly albino female House Sparrow nested for at least 5 seasons at Nipawin²⁷ and a partly albino female Mallard nested at Waterhen Marsh near Kinistino for 2 seasons.³

In almost all birds pigments are either melanins which produce black, brown, dull red and dull yellow colours, or carotenoids which produce red, orange and yellow colours. Albinism usually involves only melanin pigments. Albinism involving carotenoids is rare but does occur.¹³ If a bird has both types of pigments, albinism will usually involve only the loss of the melanin pigments and the carotenoids are retained — thus the albino Yellow-headed Blackbird and the redpoll reported above retain their yellow and pink pigments respectively.^{8, 14} The Common Cracklin record⁷ is also interesting because the description of the specimen indicates that, as with the Barn Swallow reported here, the normally blue-black

idescent plumage of the grackle had
ome pigment. Thus, it was an incom-
lete albino.

able 1 – Records of albino or partly albino
birds in the Blue Jay

| pecies | No. of records | Reference |
|------------------|-------------------|------------|
| anada Goose | 1 | 19 |
| allard | 1 | 3 |
| reen-winged Teal | 1 | 20 |
| harp-t. Grouse | 1 | 6 |
| andhill Crane | 1 | 18 |
| ree Swallow | 1 | 1 |
| arn Swallow | 4 | 2,5,17,28 |
| lack-b. Magpie | 1 | 31 |
| ommon Crow | 3 | 11,24,25 |
| ouse Wren | 1 | 22 |
| merican Robin | 4 | 5,9,16,23 |
| oh. Waxwing | 1 | 21 |
| ouse Sparrow | 4 | 4,26,27,30 |
| ellow-head Blkbd | 1 | 8 |
| ed-winged Blkbd | 1 | 15 |
| rewer's Blkbd | 1 | 10 |
| ommon Grackle | 1 | 7 |
| edpoll | 1 | 14 |
| TOTAL 18 species | 29 records | |

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READNER, J. 1958. *Albino sparrow*. Blue Jay
16(1):31.
UCEUK, Mrs. W. 1950. *Albino robin*. Blue Jay
8(3):14.
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Jay 5(3):31.

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at Regina*. Blue Jay 18(2):74-75.
⁸DEMIANYK, J. W. 1972. *Albino Yellow-headed
Blackbird*. Blue Jay 30(2):129.
⁹DOWNING, Mrs. H. 1944. *Robin*. Blue Jay
3(4):34. (also 4(2):15).
¹⁰FOREMAN, Mrs. J. R. 1942. *An albino
blackbird*. Blue Jay 1(1):3.
¹¹GREENBANK, J. D. 1953. *Interesting glimpses
of nature*. Blue Jay 11(2):8.
¹²GROSS, A. O. 1965. *The incidence of albinism in
North American birds*. Bird-Banding 36(2):67-
71.
¹³HARRISON, G. J. O. 1963. *Non-meleanic,
carotenistic and allied variant plumages in birds*.
Brit. Ornith. Club. Bull. 83: 90-96.
¹⁴JORDHEIM, S. O. 1972. *Albino redpoll*. Blue
Jay 30(2):135.
¹⁵LEDINGHAM, G. F. 1963. *Partial albino red-
wing sighted for fifth year*. Blue Jay 21(3):105.
¹⁶LEE, N. 1972. *Albino robin at Selkirk, Manitoba*.
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¹⁷LYSTER, B. 1961. *An albino swallow*. Blue Jay
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¹⁸MILLER, R. S. 1961. *A partial albino Sandhill
Crane*. Blue Jay 19(3):112.
¹⁹MORGOTCH, L. A. 1966. *A partial albino
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²⁰NERO, R. W. 1963. *Imperfect albinism in a
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²¹PIKE, C. D. 1965. *Albino Bohemian Waxwing*.
Blue Jay 23(2):108.
²²PYLYPEC, B. 1962. *The House Wren and their
albino*. Blue Jay 20(4):170.
²³REPCHINSKI, A. 1958. *You were asking*. Blue
Jay 16(4):185.
²⁴SCHAEFER, C. 1943. *Albino crow*. Blue Jay
6(3):9.
²⁵SEALY, S. 1967. *Record of white-barring in Com-
mon Crow*. Blue Jay 25(3):121.
²⁶SOUTHEY, C. F. 1954. *An albino sparrow*. Blue
Jay 12(4):5.
²⁷STREET, M. G. 1947. *English Sparrow*. Blue Jay
5(3):31.
²⁸UNDERWOOD, K. 1960. *The albino swallow*.
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²⁹VAN TYNE, J., and A. J. BERGER. 1959. *Fun-
damentals of ornithology*. John Wiley and Sons;
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³⁰WARD, A. 1955. *The unwelcome albino*. Blue
Jay 13(2):15.
³¹WOLTERS, Mrs. O. L. 1950. *An albino magpie*.
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* * * * *

MOOSE is an American Indian word, from *mus*, as spoken by the
Massamaquoddy tribe, and *moos*, as spoken by the Massachuset tribe. The word
means "he strips, eats off," and specifically refers to the eating habits of the
moose. Mary Durant. *In Pursuit of the Mous, the Snaile and the Clamm*.



Mountain Bluebird.

Gary W. Sei

MOUNTAIN BLUEBIRD TRAVELS 130 MILES TO RENEST

Part One
by LORNE SCOTT*

On May 24, 1973, conditions were ideal for catching and banding adult female Mountain Bluebirds, as they were incubating their eggs in nest boxes along my bluebird trails. The females were sitting tight on their nests, as a chilling wind was blowing from the northeast. My approach to most nest boxes was undetected, as the wind rustling in the grass helped to conceal the sound of my footsteps. I had set out that morning at 6:30 and by mid-afternoon had banded my 38th adult female bluebird of the year. Band No. 109-136438 was placed on the leg of a female Mountain Bluebird, which was incubating seven eggs in nestbox No. 1059, two miles east of

Glenavon, Saskatchewan.

A severe wind and rain storm swept through southern Saskatchewan on June 3. Northwest winds from 35 to 70 mph persisted throughout the day, temperatures remained steady around 45°F and over 1¼ inches of rain fell. Winds continued from the northwest at 35 to 45 mph on June 4, temperature climbed to 55°F and another ½ inch of rain fell. Finally on June 5 the wind subsided and skies cleared.

I returned to the Glenavon area on June 11 to band young bluebirds and incubating Tree Swallows. It soon became clear that the storm had raised havoc with the nesting bluebirds: up to 80% of the nests had been deserted along some portions of the trails. Some nests contained full clutches of colored eggs, while others held dead young from 1 to 7 days of age. Many of the successful nests fledged only one to three young. Fortunately, it was still early enough in the season that many bluebirds renested. When I arrived at nestbox No. 1059 a pair of Tree Swallows defended it against my in-

*Indian Head, Saskatchewan

usion; there was no sign of the Moun-
in Bluebirds. The Tree Swallows had
uilt their nest over the abandoned
uebird eggs, which were probably
eserted during the storm of June 3
d 4.

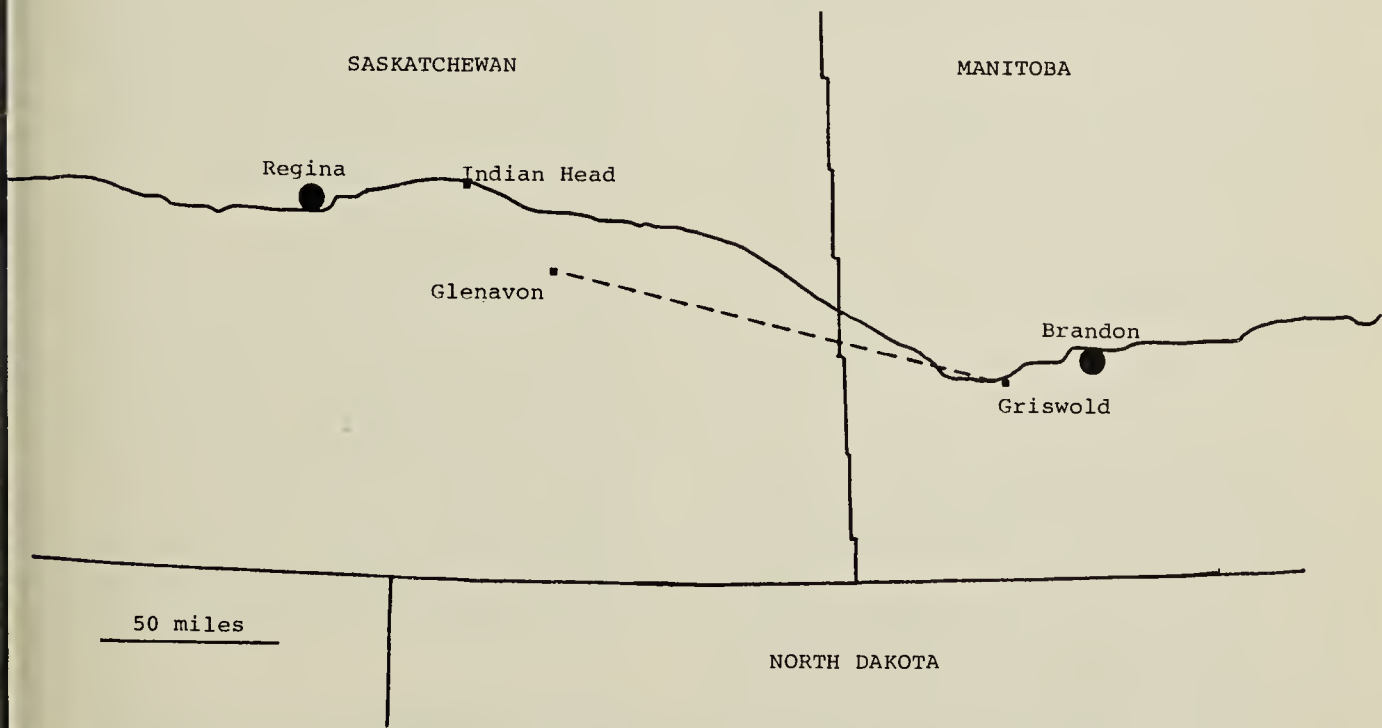
Part Two
by JACK LANE**

The network of nestlines set out by
e Brandon Junior Birders over the
ast 14 years includes a short lateral
oute beginning about 5 miles south of
riswold, Manitoba, on Highway No.
and running east and south for a
w miles, finally petering out near
ouris. This is the "SAG-PAT" line,
established 8 years ago, and now a
rolific source of new data on both
uebird species, including two of the
ve known adult hybrids that have
ome to light so far. On June 21, 1973,
hile banding on this line, I caught a
male Mountain Bluebird on eggs in
estbox No. 894 and found she
ready bore a U.S. Fish and Wildlife
ervice band, No. 109-136438. Since
is band number was a stranger to me,
made a note of it and reported it to
e Bird Band Laboratory, Laurel,
aryland. On July 8 I banded on this
ne again and found four young in
estbox No. 894; I removed one infer-

tile egg. While I made no notes of the
fact, I believe the babies were about
the awkward stage, or about 1 week
old, which meant they hatched July 1.
With the young now safely banded I
made no further visits to No. 894. In
early November I received notice from
the U.S. Wildlife Service that band No.
109-136438 had been placed on an
adult female Mountain Bluebird on
May 24, 1973, by Lorne Scott. The
nestbox, No. 1059, was located near
Glenavon, Saskatchewan, about 130
miles northwest from the location of
our Nestbox No. 894. Letters between
Scott and myself have cleared up the
loose ends, and we feel the story is
worth telling.

It is fascinating to "backtrack" on
the Manitoba nesting of this mountain
female: if we assume July 1 as a hat-
ching date for four of her five eggs, this
means incubation began June 18; the
first egg was laid June 14; the grass
nest was built June 11-13 (Est.) The
great storm of June 3 and 4, 1973, ap-
pears to have blown this little bird
right out of Saskatchewan, and, we
may assume, her mate went with her. If
he did not, the female would be faced
with the extra necessity of finding
another mate. Thus in just over one
week at most, she travelled 130 miles,
found an empty nestbox, built a grass
nest, and started the cycle of a new
clutch of eggs, which brings us to June
13 — 10 days after the storm began!

1701 Lorne Ave.,
Brandon, Man.



Map. Locations of first and second nests of bluebird are joined by dashed line.

FIRST SASKATCHEWAN WOOD THRUSH

by PAT O'NEILL*

On May 24, 1973, about 4:30 p.m., I glanced out my "bird-watching" window, which is over the kitchen sink, and was not surprised to see a thrush feeding under the apple tree in the back yard. There had been quite a number throughout the day, mostly Swainson's. Suddenly I realized that this bird was quite different from the others. It was a bit larger and his breast, so snowy white, showing none of the usual obvious yellowish colour, was covered with round spots which were large, dark-coloured and relatively disorganized. While only about 30 feet separated us, I used the binoculars on him and was flabbergasted to realize that this was surely a Wood Thrush. I consulted my bird books and every detail — dark brown back, white eye ring, other markings coincided with "my" bird's appearance. Fortunately I was able to contact Mary Houston who came immediately with son Donald and was followed closely by Dr. Stuart Houston and David. We also got the Shadicks, Stan and John, to come over quickly. All agreed the bird was without any doubt a Wood Thrush. The bird seemed very hungry and lingered for 2 or more hours feeding. In the meantime three other Saskatchewan bird-watchers, Dale Hjertaas, Wayne and Don Renaud, arrived to view the thrush and identified it as a Wood Thrush — a first authenticated record for Saskatchewan.

*1125 Elliott St.,
Saskatoon, Saskatchewan
S7N 0V4

Ed. Note: Godfrey in *The Birds of Canada* (1966) and Peterson in *A Field Guide to the Birds* (1947) show the nearest breeding in Canada to be in Ontario east of Lake Superior and in southeastern South Dakota and central Minnesota in the United States. There is also a record for Grand Forks, North Dakota, on Sept. 24, 1971, in *American Birds* 26:79, 1972.

SECOND SASKATCHEWAN WOOD THRUSH

On Oct. 5, 1973, Elmer L. Fox carefully studied a Wood Thrush in Regina.

LITTLE GULL VISITS REGINA by FRANK SWITZER*

On the afternoon of April 20, 1973 Bob Luterback and I were looking around the Wascana Waterfowl Park and the Legislative Building grounds to see if any unusual bird species had been brought in by a storm centre that moved across the northern states. The weather in Regina was a cold 36° with a 20 to 25 mph wind from the northeast which was slowly swinging to the northwest.

I was scanning the surface of Wascana Lake north of the Legislative Buildings to see if any Western Grebes were mixed in with the Lesser Scaup feeding there. Bob asked me what kind of tern was feeding from the lake surface. I looked around without binoculars and casually mentioned that it acted like a Bonaparte's Gull. However, Bob said he thought not and after seeing the bird through binoculars, I agreed with him. At this point it was rather embarrassing to be caught without a field guide. We watched the bird for half an hour and then left the area about 3:30 p.m. Upon returning home, we looked for the bird in *Birds of North America*⁴, *A Field Guide to the Birds*³ and *The Birds of Canada*.¹ We soon realized that we were not seeing a native North American bird. All indications pointed to the bird being a Little Gull, a European species.

Jim Jowsey, Marg Belcher, George Ledingham, Frank Brazier and I gathered at the south shore of Wascana Lake by 5:00 p.m. The Little Gull was

*1301 Shannon Road,
Regina, Saskatchewan.
S4S 5K9



Little Gull at Wascana.

Frank Switzer

observed by all for about 20 minutes. Its feeding habits were similar to those of a tern or a Bonaparte's Gull. However, at times it acted very much like a petrel: hovering near the water just prior to or after having caught its prey and dabbling its feet in the water. At times it would land on the water and, holding its wings aloft, thrust its head, neck and part of the body under the surface to capture food.

The bird was in adult winter plumage and, when in the air, very little black showed on the head. However, when resting on the water, more black showed on the head, though not as much as on a Bonaparte's or a Franklin's gull.

About 5:45 p.m. the Little Gull rose above the tree tops and flew to the east. All those observing the bird agreed with Bob Luterback and myself that this was indeed a Little Gull. George Ledingham's identification is reassuring for he was present at Lake Athabasca when one was positively identified there by R. W. Nero on June 8, 1962.²

The Little Gull was observed on the next day by Fred Lahrman and Fred

Bard, feeding and flying south of the Regina power plant. On the afternoon of April 22, Jim Jowsey, Wayne Gemmell, Bob Kreba, Ferne Lawrence, Frank Brazier, Elmer and Doug Fox and I again observed the gull feeding on Wascana Lake. This time it was in company with several Franklin's and Bonaparte's gulls. There was one occasion when all three species were seen resting on the water in the same field of view with 8x55 binoculars.

When the gulls were feeding one could, at a glance, mistake the Little Gull for a Bonaparte's Gull, as their actions were similar; however, the Little Gull spent more time closer to the surface of the water and appeared more petrel-like in this behaviour. The Bonaparte's Gulls would snatch their prey and rise up a few feet above the water in one motion as do terns. Jim Jowsey and Wayne Gemmell put a boat on the lake and managed to approach the Little Gull and its companion Bonaparte's Gull quite closely on two occasions. When both birds were in flight, it appeared as though the Little Gull had difficulty matching the speed of the larger gull. Twice

when they flew from one end of the lake to the other the Little Gull fell 100 to 200 yards behind the Bonaparte's Gull. This may be only when the birds are flying to escape danger. Probably in migration flight and as we saw in feeding flight, the Little Gull had no difficulty in keeping up with the flock of Bonaparte's that it must have arrived with.

Special thanks go to Bob Luterback, the person who first spotted the bird and my co-identifier. Thanks are also due Jim Jowsey, Margaret Belcher, Frank Brazier and, especially George Ledingham for confirming the identification.

¹GODFREY, W. E. 1966. *The birds of Canada*. Nat. Mus. Canada Bull. 203. 428 pp.

²NERO, R. W. 1963. *Birds of the Lake Athabasca region, Saskatchewan*. Sask. Nat. Hist. Soc. Spec. Pub. 5. 143 pp.

³PETERSON, R. T. 1947. *A field guide to the birds*. Houghton-Mifflin, Boston. 290 pp.

⁴ROBBINS, C. S., B. BRUUN and H. S. ZIM. 1966. *Birds of North America. A guide to field identification*. Golden Press, New York. 340 pp.

Editor's Note: A few Little Gulls were found nesting in Ontario in 1962!

HOUSE FINCHES SIGHTED IN REGINA

by FRED G. BARD*

At approximately 1:45 p.m. on April 26, 1973, my wife, Phyllis, called me outside to see three birds which she was sure she hadn't seen in Regina before. To my surprise, they were House Finches — all three rosy-coloured males. They were feeding in our neighbour's adjoining backyard on the ground and later on the buds of seedling plum trees. They afforded us an excellent view as they fed for about 10 minutes. In recent years during several rather lengthy visits to New Mexico and California, we had

*633 Broadway Ave.,
Regina, Saskatchewan.

become familiar with House Finches which are common residents there. They could only be confused with the Purple Finch which was a frequent visitor to our neighbourhood this spring but the song and call notes are quite distinctive from those of the Purple Finch. As well, the reddish colouring on the House Finch is a different shade, being more scarlet than the wine red or purplish red of the Purple Finch which also has a light cheek streak. However, to make certain of the identification we were able to compare field marks with the aid of Robbins' field guide, "Birds of North America" with the birds before us. The brown streaking of the breast, side and flanks confirmed the identification. Suddenly, they flew away and, although I placed mixed seeds in the area in hopes of attracting them back, they were not seen again.

L. G. Saunders reported seeing a male House Finch at Saskatoon, October 15, 1959 (*Blue Jay*, December 1959:158), but because not all field marks were noted at the time the record has not generally been accepted. Note that this species has not appeared on the official list of Saskatchewan birds.

W. Earl Godfrey in "Birds of Canada", 1966, describes their range as follows: "Southwestern and central southern British Columbia, Idaho, Wyoming, and western Nebraska south to southern Mexico." Included in the range description for Canada is the notation quote, "casual in southwestern Alberta (Jasper Park May 29, 1944)."

A FURTHER SIGHTING OF WANDERING TATTLERS IN ALBERTA

by E. OTTO HOHN*

The second edition of *Birds of Alberta*¹ states that Wandering Tattlers have been recorded in the province on three occasions, each report involving a single bird. Professor W. Ray Sal

as informed me that to his knowledge there have been no additional reports of this species in Alberta. The breeding range is northwestern British Columbia, Yukon, Alaska and probably Siberia.

It is, therefore, of interest to record that on September 2, 1973, I had good views of four tattlers accompanied by two Pectoral Sandpipers on the south shore of Beaverhill Lake, about 40 miles east of Edmonton. Observation through 10-power binoculars showed the tattler to be considerably larger than the sandpiper. They were grey above and white below though one of them still showed faint dark bars on the side of the breast. They had black beaks and greenish legs and in flight showed no wing bars or white markings on rump or tail.

These four birds not only represent the largest number of their species so far seen at one time in Alberta, but they were also observed further east, i.e., further from the main route of migration of the species, than those previously reported.

Department of Physiology,
University of Alberta,
Edmonton, Alberta.

ALT, W. R. and WILK, A. L., 1966. *The birds of Alberta*. 2nd Ed. Dept. Ind. and Dev., Edmonton, Alberta. 511 pp.

PRAIRIE NEST RECORDS SCHEME

Cards and information for the 1974 nesting season are available from:

Prairie Nest Records Scheme,
c/o Manitoba Museum of Man
and Nature,
190 Rupert Ave., Winnipeg,
Manitoba. R3B 0NZ

A summary for the 1973 season is available on request. More participants are required throughout the Prairie Provinces.

H. W. R. Copland, Coordinator.

DANCING SHARP-TAILED GROUSE AND PREDATORS

by DALE HJERTAAS*

In the spring of 1973, while censusing Sharp-tailed Grouse dancing grounds with Saskatchewan Department of Natural Resources field crews, I noted several cases of predation and attempted predation.

On May 3, at Hafford Community Pasture, 8 miles south of Hafford, George Duff and I surprised a Goshawk feeding on a dead grouse in the middle of a dancing ground. The Goshawk carried the grouse toward the nearest trees, $\frac{1}{4}$ mile away, but dropped it half way. We recovered the grouse and later photographed it to show the partly eaten right breast.

The next day at the same dancing ground we observed a male Marsh Hawk harassing grouse. Five times, it chased all 20 or so sharp-tails off the dancing ground but did not have the speed to capture a flying sharp-tail. Each time the grouse flew 40 or 50 yards, landed and almost immediately ran back part way; most then flew the remaining distance to the dancing ground.

On May 16, near Redvers, I observed another case of apparent attempted predation on courting sharp-tails. My view of this dancing was obscured by tall grass and weeds, although I could hear grouse dancing and calling vigorously. I observed individual birds flushing, flying about 10 or 15 feet and then landing. When I approached to count them, I caught a glimpse of a mammal disappearing into the weeds on the far side of the dancing ground. Its size, shape and slow speed, as indicated by moving grass, convinced me that it was a skunk, and that the unusual flushing by single sharp-tails was caused by this skunk endeavouring to capture a bird. The individual grouse flushed when approached closely, but were not frightened enough to leave. This reac-

*1118 Colony St.,
Saskatoon, Saskatchewan.

tion is similar to that reported by Rogers² when a deer was seen playing with Sharp-tailed Grouse in Colorado, striking at them with head and feet. These grouse merely moved a short distance and resumed dancing.

Sharp-tailed Grouse, when absorbed in the dance, are easy prey to coyotes according to Bent³. Rogers² says that few things distract dancing Sharp-tailed Grouse. He reports six ravens, four ducks and two hawks spending an entire morning watching dancing grouse in Colorado. The hawks occasionally disrupted activity by swooping at the birds. When a coyote watched dancing sharp-tails, the grouse paid little attention to the intruder.

Predation on dancing Sharp-tailed Grouse is noted most years by DNR personnel. Wayne Pepper¹ has found remains of five banded and other unbanded grouse, apparently killed by predators, all within 300 yards of dancing grounds near Asquith. This is supporting evidence that predation at dancing grounds is not uncommon.

I wish to thank Wayne Pepper and Dr. C. Stuart Houston for their help with this article.

¹BENT, E. C. 1963. *Life histories of North American gallinaceous birds*. Dover Publications Inc., N.Y.

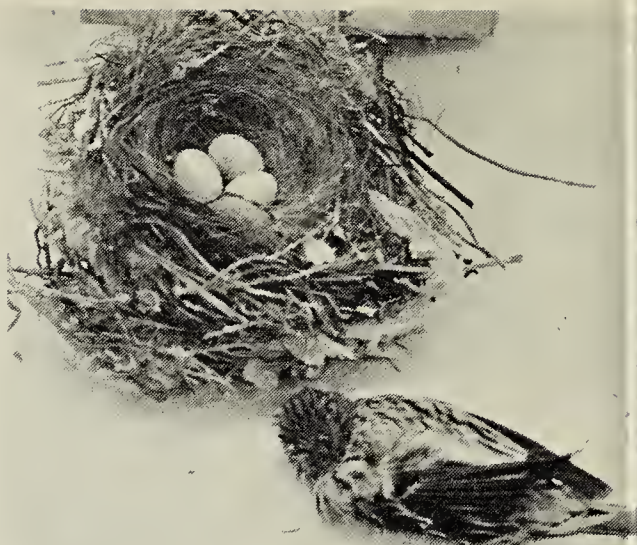
²PEPPER, G. W. 1972. *The ecology of Sharp-tailed Grouse during spring and summer in the aspen parklands of Saskatchewan*. Saskatchewan Dept. Nat. Res. Wildl. Rep. No. 1, 55 pp.

³ROGERS, G. E. 1967. *The Sharp-tailed Grouse in Colorado*. Colorado Dept. Nat. Res. Tech. Pub. 23, 94 pp.

PINE SISKINS NESTING AT MOOSE JAW

by EDITH KERN*

Bird-watchers of the Moose Jaw Natural History Society were quite excited to have found *two* known Pine Siskin nests in the city in the spring of 1973. One nest, well hidden, was



Pine Siskin and nest. Regina Leader-Pos

found about 5 or 6 feet up in a spruce tree at the Ken Bidwell home near the centre of the city. The Bidwell family had seen the birds around for 2 or 3 weeks in March and, after realizing they were probably nesting, kept close watch for about 10 days. On April 5 they decided that the nest had been deserted, and on April 6 removed the nest which had three eggs in it. On April 7 they found the dead female Pine Siskin. They then informed Leith Knight, president of MJNH, who suggested that the nest and skin be turned over to the Saskatchewan Museum of Natural History. Fred Lahrman has since informed us that the eggs were "very heavily incubated."

The second nest was in a taller tree several blocks northwest of the first nest-site, and was active until about May 2, when all activity ceased and the birds disappeared. Cats are thought to be the cause. The nest was too high up to be retrieved.

As of May 12 there were numerous flocks of 8 to 15 Pine Siskins coming daily to feeders (sunflower seed) in other areas of the city but no other nests were discovered. Also, Evening Grosbeaks (adult male and female) and immature Red Crossbills (male and female) were still coming in daily to feeders (sunflower seed) in several areas of the city.

*1086 Alder Ave.,
Moose Jaw, Saskatchewan.
S6H 0Y4

DO PREDATORS HAVE RIGHTS?

by ROBERT W. PAGE*

Of all the species on earth, man, the predator, is the most successful. He can be found almost anywhere and he ultimately has dominion over the other creatures with which he shares this planet. Man has domesticated some birds and mammals and has then attempted to ruthlessly eliminate the remaining animals that compete with him in any way. His main competitors have, of course, been other predators; it is with them that early man came into conflict when seeking food amongst the earth's grazing and browsing animals. Today, with his great herds of cattle, sheep, pigs and horses man still maintains his ruthless competitive attitude towards fellow predators.

In Canada this competition has led to relentless pressure being applied to such animals as wolves, cougars, grizzly bears, coyotes and foxes. Birds too have been subjected to man's selfish refusal to co-exist. Hawks, eagles and owls have provided instant target practice whenever their paths crossed that of a man with a gun. In the past, farmers and hunters have either been ignorant of or downgraded the usefulness that predators play and they have not considered the ethical question of whether such species have a right to exist or not. Such thinking has been applied to the new technology available to gunners and the result has been spectacles such as the Kenora wolf hunts of Ontario, the now infamous Quebec acrylic jaw-bone trophy wolf hunts and Saskatchewan's snowmobile fox and coyote hunts. The

latter are carried out legally with the sanction of the Saskatchewan Department of Natural Resources. The changing attitudes of an increasingly better educated, more civilized electorate across Canada has brought an end to the Ontario and Quebec wolf hunts but in Saskatchewan there is still debate as to whether or not foxes and coyotes should be hunted from power toboggans or other motorized vehicles. While the majority of people now feel that the Canadian experience is one of both civilization and wilderness and that respect must be shown for all members of the natural world, others mount their snowmobiles and roar off to destroy whatever foxes or coyotes they can exhaust, shoot or run down. Actually, running down the animal is illegal, but there is usually nobody around to see that an animal, tortured to the point of exhaustion, is shot instead of having its back broken by a snow machine.

In the past, few people really cared if something like this went on, but as the relative size of our planet shrinks and as humans become more plentiful and wildlife more scarce, people are beginning to feel that perhaps animals do have a right to exist. If specific animals become a real problem, and by real I mean a problem documented by government wildlife or agricultural personnel through field checks, then it may be necessary to kill those individuals but even then they have a right to a humane death.

If a particular area in Saskatchewan is suffering excessive predation on livestock or game, then some controls should be initiated. However, the loss of a sickly calf to a coyote should not

be considered a predator problem. Ranchers know that no coyote can take a healthy calf from a cow that is still interested in its welfare. Similarly, it is questionable whether or not one can reasonably call it a predator problem if lambs are left unattended in an enclosure without a dog or adequate fencing or some other kind of protection. Sloppy farming practices can sometimes attract predators into an area. If we are going to live with a balanced view of nature, some onus should be on the farmer to ward off possible problems. Killing predators should be the last, not the first, line of attack.

In the past, when a predator problem arose, overreaction was usually the rule, not the exception. The widespread dropping of poison baits was one solution. This caused the indiscriminate, cruel and long-suffering death of *any* predator that ate the poison bait. It did the same to all other birds and mammals that ate either the baits or their poisoned victims. The rights of animals to a humane death hardly entered the minds of the public

or their wildlife departments. Other control methods have included leg hold traps, hunting from aircraft and now from snowmobiles. These methods were effective, often too effective, but they gave no consideration to the animals being controlled. In effect, control appeared to be an attempt at widespread, indiscriminate elimination.

More positive solutions to predator problems exist but their acceptance requires a better appreciation of the role of predators in our environment. Their value as rodent controllers should be made more widely known and should their effectiveness in taking the weak, old and sick individuals of game species. Man and hunter seek prize animals, but predators that kill to live seek out the least healthy as a sure way to fill their stomachs. The value of the enjoyment that people can obtain from living in a province with a multiplicity of animals should also be publicized, as well as the fact that the man's assumed enemy, the predator, has many traits in common with him. For too long we have identified wi-



Snowmobiles

Sask. Photo/Arts Service



Results of a coyote hunt with bombardiers in the Abernethy, Saskatchewan, district in the 1950's. Fred Bard

the poor lamb and the hunted deer. We humans are really more like the cougar, the coyote, the wolf. How many men like to be called sheep?

Positive solutions to predator problems should include the use of humane traps. Quick-kill *conibear* type traps do not torture animals as do leg-hold traps. More research could probably develop even better, faster kill traps. Secondly, it may be better game management to declare such predators as foxes, coyotes and wolves to be game animals. Then some could be taken each year by hunters using high-powered rifles, a method that usually kills an animal quickly. As a game animal, bag limits and set seasons could enable qualified wildlife biologists to maintain a healthy population. Of course, farmers should still have the right to shoot any predator that is harrassing their stock, although a few well-placed warning shots would discourage future visits from such an animal.

Snowmobile hunting, however, is the last method of predator control that ever should be allowed. Letting people use power toboggans in this way tends to encourage a lack of respect for life

and leads to the inhumane deaths of too many animals. It also has unhealthy implications for all society.

First of all, snowmobile hunting, through the tirelessness and speed of the machines involved, is a one-sided type of hunting, catering to the worst in man. It enables people who have tired of simply driving their machines in circles to suddenly have a legally justified excuse to pick some victim, then run it to oblivion. The fact that such a "sport" exists in Saskatchewan is, no doubt, the envy of all redneck snowmobilers in neighboring provinces. Saskatchewan's precedent is a danger to the wildlife in other parts of Canada where power toboggans are now under more control.

Secondly, snowmobile hunts perpetuate the now outdated idea that there are good and bad animals and that it is alright to do anything you want to be "bad" animals. Snowmobile hunts detract from what is now being taught in schools across Canada, that all life is interconnected and must be respected. Such hunts reject the ethic of man trying to live more in harmony with nature, with an enlightened dominion over the beasts

and birds of our earth, rather than a brash, ruthless dictatorial approach whereby everything — animal and plant — that appears in his way must be destroyed.

Finally, there is the actual problem of controlling snowmobile abuses. With more snowmobilers getting their recreation from running down foxes and coyotes, how does one get them to stop there? As long as our society accepts the use of snowmobiles to hunt one or two species, it will be more ready to overlook the hunting of other animals, anything from jack rabbits to deer and moose. As long as one kind of snowmobile hunting is legal, it is less likely that the courts will be sufficiently severe on other illegal forms of motorized hunting.

It would be appropriate if members



Fred Ba
Coyote being chased by snowmobile.

of the Saskatchewan Natural History Society and other readers of the *Blue Jay* would write to Saskatchewan's natural resource minister, the Honourable John Kowalchuk, care of the A



Snowmobiles in woods.

Sask. Photo/Arts Service

Administration Building, Regina, and express their views on legislation that allows municipalities to issue permits to people to use snowmobiles to hunt predators.

Hopefully, 1974 will be the last year this practice is allowed. Saskatchewan, with its strong Natural History Society, its beautiful Natural History Museum in Regina and its rich diversity of wildlife and scenery is presently diminished by its winter snowmobile hunts. This is not something about which a thoughtful citizen can be proud.

ABSTRACT FROM SASK. D.N.R. POLICY CONCERNING PREDATOR PERMITS (Oct. 2, 1972)

From INTENT: "The practice of pursuing and killing wild animals with power toboggans has resulted in . . . the 1970 session of the legislature (amending) Section 29 of the Game Act (to read as follows:)

Unless expressly authorized by the minister, no person shall use a power boat or vehicle for the purpose of:

(a) chasing or pursuing any wild animal or wild bird; (b) disturbing any wild animal or wild bird; (c) driving any wild animal or wild bird towards hunters; or (d) injuring or killing any wild animal or wild bird with such power boat or vehicle.

"Unfortunately, in certain agricultural areas in Saskatchewan, rural residents are confronted with local problems of predation by coyote and/or fox which are difficult to handle by conventional methods of control . . . Therefore, it is deemed necessary to issue permits to rural residents so affected to deal with these local problems. There is no intention whatsoever to permit the use of motor toboggans for sport hunting or pelt hunting."

From POLICY: "1. Special permits to use snow toboggans for hunting fox and coyote will be issued when these animals are causing depredation problems. The permits are to be issued by the Conservation Officer . . .

"2. Local Conservation Officers must be prepared to discuss the conditions of issuing such permits with the local R.M. council. The importance of restricting authorization for permits to bonafide cases of animals causing predation should be stressed.

"3. The R.M. or L.I.D. will only be required to pass one resolution authorizing the Department to issue permits to residents within the R.M. or L.I.D. . . ."

From APPLICATION: "List total losses of livestock or poultry during the past three months caused by coyotes or fox and dates (applicant's land only) . . ."

COUGARS IN MANITOBA

by ROBERT W. NERO*

In the early years, cougars were perhaps uncommon in Manitoba but

with the increase in White-tailed Deer populations, cougars seem to have increased in number. Since the 1960's, especially, there have been several well documented sightings of cougars. For the 71-year period from 1879 to 1950 there are only 16 reports of cougars in the province, but 21 reports

Condensed from Conservation Comment, published monthly and available free from Manitoba Dept. of Mines, Resources and Environmental Management, Box 11, 139 Tuxedo Blvd., Winnipeg, Manitoba. R3C 0V8

exist for the decade from 1951 to 1960, 38 reports from 1961 to 1970 and more than 30 reports since 1971. This information has been obtained from the files of the Manitoba Museum of Man and Nature and, recently, through efforts to solicit records from government staff and the public.

These reports include about 86 sightings, eight observations of cougar tracks or deer kills attributed to cougars and five animals that were shot. A specimen in the Hales Museum at Brandon University is believed to have come from southwestern Manitoba, another specimen shot locally had been mounted and two skins have been reported. In addition, three plaster casts of tracks are known, including one taken in 1973. Observations of seven pairs and four family groups strongly suggest that the cougar is resident in Manitoba.

Observers who have reported cougars include trappers, farmers, housewives, foresters and even biologists, to name a few. The circumstances under which sightings were made and the detailed descriptions leave little doubt as to the authenticity of the records.

Plaster casts of tracks would seem to provide sound evidence, but even authorities disagree on the identification of track casts. The problem is complicated by the fact that a big lynx may have a larger paw print than a small cougar and a single track is less enlightening than a series. Examination of a trail is best in any case. Regardless of the size of its foot prints, a cougar usually drags its long tail on the ground and, at least in snow, leaves a tail mark that is undeniable evidence.

Male cougars travel alone and may range over considerable area, though in prime deer range they may keep within a home range of about 25

square miles. Mating takes place almost any time when a male encounters a female. The female cat looks after the one or two kittens by herself, defending them from males who seem to lack paternal care instincts. Thus, loss of a cougar to a gun would have a marked effect, especially in Manitoba where the cougar population is undoubtedly limited.

Photographing a Manitoba cougar would be an exciting accomplishment and a photograph should convince everyone. Several persons have said they would have been able to photograph a cougar if they had had a camera handy. Since cougars are often seen crossing highways during daylight hours it may not be long before one gets its picture taken. Here is a challenge for wildlife photographers and just about anyone who can snap a picture!

Cougar range in Manitoba probably coincides with that of white-tailed deer. It may be that cougars prefer less settled or remote areas, such as the Duck and Porcupine mountains, northern Interlake, Manigotagan River area, etc. Nevertheless, in addition to several records from each of the places, there are records for the southernmost part of the province.

As a symbol of wild nature the cougar ranks high. Sightings of this secretive animal invariably are thrilling experiences according to those who have had such good fortune. Simply knowing that there are cougars adds something to outdoor experiences in Manitoba.

Postscript: A cougar was shot and killed on the night of December 25, 1973, about 35 miles northeast of Winnipeg. The animal, a young adult male weighing about 100 pounds and measuring 83 inches from tip of nose to tip of tail, is now the property of the Manitoba Museum of Man and Nature, Winnipeg, thanks to the cooperation of the Manitoba Naturalists Society. — *R. W. Nero.*

WHAT HAPPENED TO COMET KOHOUTEK?

by G. N. PATTERSON*

The much publicized "Comet-of-the-Century" turned out to be a visual dud. What happened to it? Was the best scientific observational program a waste of time?

What actually happened is, of course, well known. It's the "Why?" that is yet unanswered. The comet brightened gradually as it approached the sun, although not as brilliant as originally forecast. It did achieve a brilliance as bright as Venus when it was close in to the sun but only the SKYLAB astronauts could see it at that time. Then, as it swung around the sun, the brilliance dropped sharply and it was only visible to the naked eye, provided you knew exactly where to look for it, for less than a week. It gradually faded in brightness until it could only be seen with the aid of binoculars or a telescope. The great sweeping tail forecast never did develop. Why?

Any answer to this question is highly speculative at this time. The recasting of a comet's brightness is always a calculated guess based on the performance of previous comets and, hence, is a very unpredictable figure. So much depends upon the constituents that form the nucleus of the comet and these can only be known after the comet has developed. In this instance, the final answer will only be known when all the observational data is recovered and analyzed and that could take up to a year or more.

What is known is that the nucleus of

Comet Kohoutek was larger than any other known comet since scientific measurements have been taken. Earth-based spectroscopic measurements have been taken showing a wide variety of chemical constituents common to other comets, plus other constituents not noticed in previous comets. The full story will only be completed once the data from SKYLAB is recovered and analyzed.

It is presently being speculated that Comet Kohoutek is a new kind of comet. The vast amount of data being obtained will result in a very intensive re-appraisal of our present concept of comets and, because of this, Comet Kohoutek can still justifiably be labelled "The Comet of the Century", even though it resulted in a very poor visual display.

30 Years Ago

Those who knew the *Blue Jay* thirty years ago will remember the stiff yellow cover with the blue lettering, on which appeared the names of the officers of the Yorkton Natural History Society and a statement of the Society's objects. The stated aim of the Society was simply expressed, but comprehensive: "To foster an active interest in every branch of nature study, and to promote the conservation of all wild life; also to act as a connecting link between nature lovers in Saskatchewan."

*Physics Department,
University of Saskatchewan,
Saskatoon, Saskatchewan.

By the time five numbers of the *Blue Jay* had appeared, members were beginning to express an interest in how it was published. Some members, who realized that the Society had incurred a deficit in the previous year because of the cost of publication, were able to send donations. In order to reply to those who asked how the *Blue Jay* was actually produced, Mrs. Priestly wrote in the Jan.-Feb.-Mar. 1944 issue:

... here briefly is the "set-up." Mrs. Priestly is editor and responsible for the whole job of writing it. Stuart Houston is printer and publisher. Mr. Priestly comes into the picture as copy-reader. The

"blueing" of the title letters on the front page is done by a "bee" of as many Yorkton members as can be persuaded to revert to childhood and spend an afternoon or evening crayoning. Putting the pages together and rolling the bulletin for mailing is carried out by the boys in our society — Vernon Barnes, Neil Black, Harvey Beck, Jim Smith and Michael Priestly, to whom special thanks are due. And, needless to say, no "Blue Jay" could be produced without the many interesting letters from members from all over the province, as well as suggestions received from Yorkton friends.

NATIONAL WILDLIFE WEEK **April 8-13, 1974**

The theme of National Wildlife Week this year is "Preservation of Wetland Habitat". More than 100 years ago, Henry David Thoreau wrote: "Hope and the future for me are not in lawns and cultivated fields, not in towns and cities, but in the impervious and quaking swamps ... A town is saved, not more by the righteous men in it than by the woods and swamps that surround it." If you share Thoreau's feelings, then let your elected officials — city, municipal, provincial and federal — know how you feel about the environmental problem of wetland destruction. Write, phone or see them in person. (Partly from Canadian Wildlife Federation's *Wildlife News*, Autumn, 1973).

SNHS FIELD CAMPS

Grasslands camp near Val Marie in the heart of the ranching country, May 25-27. For persons interested in studying or photographing native grassland and the associated flora and fauna, including prairie dogs in the Society's Prairie Dog Sanctuary.

Migration camp at the north end of

Last Mountain Lake during the Sandhill Crane migration, August 31-September 2.

Fee of \$40.00 per person. Each camp is limited to 20 persons, with places in each reserved for out-of-province registrations.

For more information —

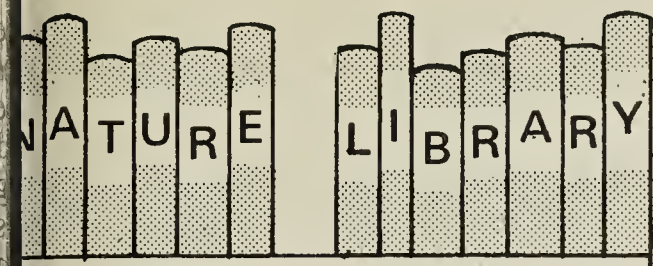
Mrs. Jeanie Wagner,
SNHS Secretary,
University of Sask., Regina Campus
Regina, Saskatchewan.

SUMMER MEET AT ESTEVAN

Our 1974 Summer Meeting will be headquartered at Estevan. Tom Gentes is organizing a series of field trips to explore this unique area and Lloyd Peterson is working with local members to plan other program items. Please be with us on June 7-8-9.



Fred Lahrm
Dragline at strip-mining operations near Estevan, Saskatchewan.



BUTTERFLIES OF SASKATCHEWAN

by Ronald R. Hooper
Sask. Museum of Natural History,
Regina, Sask.
16 pp., July, 1973. \$3.00.

This is an authoritative account of the 135 species of butterflies known to occur in Saskatchewan. Half a page of text, with succinct notes on appearance, range, dates and habits, is devoted to each species. On the facing page are black-and-white photographs by Ron Long of the top view of a male and female and one underside view of each species. There are also 24 superb coloured photographs by Robert J. Long, Fred W. Lahrman and Donald Hooper.

Introductory chapters offer readable and interesting accounts titled What are Butterflies? Butterfly Habits, Life History, Where to look for Butterflies, Collecting Butterflies, Mounting Butterflies, Identification and Saskatchewan Life Zones. There are also four pages of sketches by Fred W. Lahrman and J. Pickering, a map, 20 pages of branching identification keys, 10 pages of hypothetical and expected species, 3 pages each of reference list and check-list, and a good index.

Hooper has done his historical work well. Three species, Red Disked Alpine, Dorcas Copper and Brown Elfin, and a subspecies of Spring Azure were first described from specimens collected in Saskatchewan by the Franklin expeditions in the 1820's. All four have Cumberland House as their type locality. Hooper, however, was unaware that the scientific name of the Brown Elfin, *Allophrys augustinus*, (first named by Kirby, *Thecla augustus*) was perhaps unique in being named for an Eskimo.

The talented and helpful Eskimo, Augustus, who accompanied both the first and second Franklin expeditions, died in February, 1834 near the end of an extraordinary winter walk of 1,200 miles from York Factory to Great Slave Lake, where he wished to help his old friend George Back on a third expedition to the shores of the Arctic Ocean.

Mary and I first visited the Hooper twins, Ronald and Donald, at the family farm northeast of Somme, Saskatchewan, in June, 1953. They had in three years arranged a creditable museum of mounted birds (150 species) in a granary, written a list of birds for the district and had a collection of pressed plants. They had begun a collection of butterflies and moths, but were in trouble because they had run down the batteries of their father's tractor the previous night while "sugaring" for moths in the tractor's headlights! We were amazed at their rapid progress towards becoming all-round naturalists in this era of specialization.

After some years away from the Somme area, Donald is again operating the family farm. Rev. Ronald R. Hooper is in charge of a mission to the Indians in the Qu'Appelle Valley. Ronald has spent his holidays and spare time when employed to collect and sort insects for the Saskatchewan Museum of Natural History. He has mastered the many complexities of butterfly identification, made extensive collecting trips throughout the province and become Saskatchewan's authority in this field.

Butterflies of Saskatchewan is a valuable contribution to knowledge, will be a helpful reference for all naturalists and belongs in every school library. It emphasizes how few have taken any interest in our butterflies and points out what further studies are needed. Ronald R. Hooper and the Saskatchewan Museum of Natural History are to be congratulated for an all-round excellent production. — C. Stuart Houston, 863 University Drive, Saskatoon, Sask.

Editor's Note: For those who would like to see more Saskatchewan species in colour, the adults of 77 proven and 15 hypothetical species appear in the little paperback, *Butterflies and Moths*, a Golden Nature Guide by Mitchell and Zim. Klots' *A Field Guide to the Butterflies* in the Peterson series has 71 proven and 13 hypothetical species in colour. Neither book is complete for Saskatchewan.

SOME EXCERPTS FROM "THE BUTTERFLIES OF SASKATCHEWAN"

SIMUS ROADSIDE SKIPPER — Apparently the only Canadian record is a male in fresh condition captured by the author near Rosefield, Saskatchewan, on June 27, 1968.

ROADSIDE SKIPPER — The Roadside Skipper is usually found along pathways through poplar woods. The male perches on the path, and protects his territory with great vigor, in spite of his small size. He drives away other butterflies and even buzzes at the butterfly collector! The female lays her eggs on Kentucky blue grass and other grasses.

LEAST SKIPPER — You sometimes have to do more wading for this butterfly than for most of our other species. East of Tantalion they flew up from vegetation in a spring-fed stream. At Moose Mountain Park, they were disturbed from the rushes along the water's edge of Kenosee Lake. At Oak Lake, Manitoba, one was feeding at an arrowhead blossom out in the water.

CHRISTINA SULPHUR — The Christina Sulphur was first collected by Mrs. Christina Ross near the Smith Rapids in northern Alberta, in 1862, and was named after her . . . It is found in gravelly and stony places such as on rolling prairie, hill-tops, along rocky lake shores, or among jackpine. Walter Krivda, of The Pas, Manitoba, has raised it on *hedysarum*.

PAINTED LADY — The Painted Lady or Cosmopolite is found in most of the world. North in Canada to Ontario (Fort Severn), Manitoba (Churchill), and Northern Territories (Fort Resolution). Common in Saskatchewan north to Hasbala Lake. (May 21 - July 10) (August 29 - October 18). Sometimes more plentiful when our local population is apparently increased by a migration from the south. In the spring of 1952, Painted Ladies were seen moving northwestward, one after the other, for several days. 1973 was another migration year.

BIRDS OF ALBERTA, SASKATCHEWAN AND MANITOBA

By D. A. Hancock and Jim Woodford,
General Publishing Co.,
Don Mills, Ontario.
68 pp. 1973. \$5.95

This is primarily a picture book. It has excellent photographs, from one to seven per page on 63 of its 68 pages. One hundred and thirty-three species are illustrated, most with one or both adults at the nest.

The text is brief, too brief as suggested by the amount devoted to each of the four parts of the book. (1) "About Birds" discusses classification, behaviour and ecology in less than four pages. (2) Birds are divided into 11 arbitrary groups which are described in a page and half with no text for three groups; swallows are the only perching birds discussed. (3) Field guides, binoculars, photography and sound recording receive two pages of text. (4) Thirty pages are used to locate and describe a few of the birds found at 20 localities in Alberta, Saskatchewan and Manitoba.

A total of four pages is devoted to: (1) "Clubs to Join", including Regional and defunct Prince Albert Natural History Societies (but not Saskatchewan and the Manitoba Wildlife Federation (but not its counterparts in Alberta and Saskatchewan); (2) "Reference" including Peterson's eastern bird guide but not his western one which is the proper one for this region; (3) A list of check-lists for various regions in Canada; (4) Number of species and individuals for eight Christmas Bird Counts for 1972 (not 1972-73 as stated); (5) A check-list of the Prairie Provinces which omits 29 species found on the 4-year-old Saskatchewan check-list and 22 species in the 6-year-old edition of *The Birds of Alberta*. Missing species include Ruffed Grouse, Golden and Black-bellied Plover and Harris' Sparrow. Also listed is Cave Swallow, a species not reported in *The Birds of Canada*.

5) An index to species in the photographs but not in the text. And even with this limited scope the index has a number of errors. It lists four species *not* illustrated (Red-winged Blackbird, Surf Scoter, Yellow-bellied Flycatcher and Yellow-bellied Sapsucker) and omits three that *are* illustrated (Barred Owl, Mute and Trumpeter Swans). Some species are listed where their names are not likely to be found (Killdeer under Plover but not under K, Blue-winged Teal only under Ducks, Merlin only under Falcon, etc. There are also errors in page numbers for eight other species.

Sparse as the text is, it contains many errors of fact, for example: North American cuckoos do not lay eggs in other birds' nests (p. 15); Gyr-falcons do not live only on ptarmigan (p. 14); Merlins, Sharp-shinned and Cooper's hawks are not "strictly" bird-eating hawks (p. 26); Wascana Bird Sanctuary, Regina, does not support "many millions of birds" and Sage Grouse are not found "a few yards" from Wascana. The authors have seen to use a unique spelling for several species, e.g., Gos Hawk and Gyr-falcon. They also list a Great Gray Hawk (presumably Owl) for northern Alberta.

The boundaries for Boreal Forest and Canadian Shield differ significantly from those in the Atlas of Canada¹ and some so-called life zones are not life zones in any standard text.

The photographs appear to be properly identified except for one which appears twice — once as a

Yellow-bellied Sapsucker (p. 9) and again as a Yellow-bellied Flycatcher (p. 55). The bird is probably a Red-headed Woodpecker. One wonders why there are two or more photos of 25 species and none of Whooping Crane, Gray Partridge, Mountain Bluebird and other prominent birds of the region.

In summary, this is a good picture book, as far as it goes, but the text is too brief to be of much help and it is too often unreliable. Beyond that there is little to commend the book. The title as it appears in large letters on the cover, implies that all the birds of the Prairie Provinces are covered. In fact less than 1/3 of our 450 species are illustrated and still fewer are discussed. For a dollar less one can learn much more about the identification and ecology of birds in Western Canada (and beyond) from either of the best recognized field guides^{4 5}. — *Wayne E. Renaud*, 1 McDermid Crescent, Saskatoon, Sask.

¹*Atlas of Canada*. 1957. Dept. Mines and Technical Surveys, Ottawa, Ont.

²*Field check-list of Saskatchewan birds*. 1969. Dept. Natural Resources, Regina, Sask.

³GODFREY, W. E. 1966. *The birds of Canada*. Nat. Mus. Canada Bull. 203. 428 pp.

⁴ROBBINS, C. S., B. BRUUN and H. S. ZIM. 1966. *Birds of North America. Guide to field identification*. Golden Press, New York. 340 pp.

⁵PETERSON, R. T. 1969. *A field guide to western birds*. 2nd ed. Houghton-Mifflin, Boston. 360 pp.

⁶SALT, W. R. and A. L. WILK. 1966. *The birds of Alberta*. Dept. of Industry and Development, Edmonton, Alberta. 511 pp. 2nd ed.

BOOKS FOR YOUNG NATURALISTS

by MURIEL CLANCY*

The following is a brief list of books particularly suited to students in grade school but also of interest to older boys and girls.

ALIKI. *Fossils tell of long ago*. 1972. In pretty illustrations and lucid text AlikI explains just what fossils are, how they were formed and what they tell us of ages past. Grade 3. J 560 A411

ATWOOD, Ann. *The kingdom of the forest*. 1972. A photographic essay on the self-renewing cycle of life in a forest. Grades 4, 5. J 574.5264 A887

BARKALOW, Frederick. *The world of the gray squirrel*. 1973. How and why this animal is still prospering although it is widely hunted is made clear in this vivid, well-documented text.

Grade 5 up. J 599.32 B254

BERMAN, Lucy. *Nature thought of it first*. 1971. Tells how man has copied nature's tools, traps, defenses, weapons and inventions and applied them to his own use.

Grade 5. J 591.5 B516

BRENNER, Barbara. *Is it bigger than a sparrow?* 1972. A bird-watcher's handbook for beginners containing descriptions of 16 frequently sighted birds.

Grades 3, 4. J 598.2 B838

CONKLIN, Gladys. *Insects build their homes*. 1972. A simple, easy-to-understand book about insects. Helps children to understand how varied and fascinating the insect world is.

Grade 3. J 595.7 C682

DARLING, Louis. *Greenhead*. 1954. Tells the story of a Mallard Duck from his birth in Canada to his migration in the fall. It also contains a wealth of information about waterfowl in general.

Grade 5 up. J 598.4 D221

DAWSON, Blair. *Studying mammals*. 1972. The purpose of this book is to help students acquire the skills of scientific enquiry and further their appreciation of the animal world.

Grade 5 up. J 599.097 D272

EDSALL, Marian. *Battle on the rosebush*. 1972. Factual information about amazing insect life that is as near as your backyard is described in clear and entertaining style. Includes over 40 illustrations.

Grade 5 up. J 595.7 E24

GREGORY, Otto. *Mushrooms and toadstools*. 1972. A simple picture-book guide to the common fungi. Describes their role in the plant world and some of the legends and traditions surrounding them.

Grades 5, 6. J 589.222 G823

HARRIS, Larry. *Twilight of the animal kingdom; the endangered species*. 1972. This book allows the reader to view and read about 22 endangered species which he or she will never observe in either natural habitat or a zoo.

Grade 5. J 599 H314

HAWES, Judy. *My daddy longlegs*. 1972. Describes the tall spiderlike creatures and also instructs the young naturalist in how to find and observe them close up.

Grade 3. J 595.4 H391

MAY, Charles. *A book of insects*. 1971. Author tells the life history of 28 of the commonest and most interesting insects.

Grade 5 up. J 595.7 M4

MAY, Julian. *Cascade cougar*. 1972. Written in a story form, this tells a great deal about the life and survival tactics of the cougar.

Grades 3, 4. J 599.744 M46

NAYMAN, Jacqueline. *Atlas of wildlife*. 1972. Promotes an understanding of animal distribution. Text describes in a clear, non-technical way the characteristic animals of various regions relating this to the climate and vegetational zones.

Grade 5 up. J 591.9 N3

RHODES, Frank. *Geology*. 1972. Introduces the earth: its relation to the rest of the universe, the rocks and minerals of which it is made up, the forces that shape it and the 5 billion years of history that have given it its present form.

Grade 5 up. J 550 R4

ROSS Wilda. *Who lives in this log?* 1971. A simple approach explains the meaning of ecology in the most practical way.

Grades 3, 4. J 574.264 R8

RUSSELL, Helen. *Winter: a field trip guide*. 1972. Instructs children in interesting things to look for on a field trip in winter.

Grade 4 up. J 500.9 R9

SCHAEFFER, Elizabeth. *Dandelions, pokeweed and goosefoot*. 1972. Simply written this book serves to remind us that many plants growing wild today were the basis of survival for the early pioneers.

Grade 5 up. J 581.6 S2

SIMON, Seymour. *Science projects in ecology*. 1972. Twenty projects that can be done with inexpensive material either at home or in the classroom.

Grade 5 up. J 574.5 S5

SMITH, David. *Wildlife in danger*. 1971. Coloured pictures accompanied by a short text describe each animal, its location and the situation regarding extinction.

Grade 4 up. J 591.5 S6

STEINER, Barbara. *Biography of a polar bear*. 1972. An exciting picture of the mammal that is king of the Arctic.

Grade 5 up. J 599.74 S8

VAN WORMER, Joe. *The world of a moose*. 1972. Tells the life cycle of moose through the season's cycles.

Grade 5 up. J 599.7357 V285

ZAPPLER, Lisbeth. *The natural history of the tail*. 1972. A humorous, yet scientifically accurate tour of the tails to be found in the animal kingdom.

Grade 5 up. J 596.018 Z

*Saskatoon Public Library,
23rd St. and 4th Ave.,
Saskatoon, Saskatchewan

Letters

A HERD OF DEAD PORCUPINES

While swathing grain in August, 1973, I found at least six dead porcupines. The grain was flattened in a circle of about 15 ft. to 18 ft. across and there were indications there had been a fight in each. The bones were gone. It is a mystery. In other years I may have found one dead porcupine but usually none.

Last year I saw a wolverine which might kill and eat porkys but, due to its scarcity, not likely.

I wonder if any other readers can throw any light on the subject. — *G. M. Hewson*, Langbank, Sask.

A TRAPPED BALD EAGLE

As a young member of the Saskatchewan Natural History Society, I would like to relate an incident concerning my father, my brother (Darren, age 13), myself and a Bald Eagle.

Late in November, 1973, while we were ski-dooing along a trail north of Hudson Bay in the provincial forest, we came across a young Bald Eagle caught in a trap. The eagle was caught only by his claws on one leg. It showed

fear and aggression towards us as we approached. We then cut a small pole and attempted to hold the eagle down in order to release the trap. The eagle then showed more fear of us and would not hold still. Finally, we had to tap it on the head to stun it. Then we released the trap and inspected the bird for injuries. After several minutes had passed the bird gained consciousness and much to his surprise was able to fly away amongst the trees. — *Dwight Hayes* (Age 14), Box 1181, Hudson Bay, Sask.

TWO WHITE PARTRIDGES IN ONE COVEY

I have an incident to report that may be of interest to you. During August and September, 1973, I sighted what appeared to be white partridges in a flock of 15 or so birds, about 20 miles west of Leader, Saskatchewan. Then later in September I got a good look at them while I was combining. There were two albino chicks in this flock. The young were nearly as big as the parent.

These albino chicks had the same black crest on their breast as the other partridges but otherwise were pure white. I had a good look at them, as I was only about 20 yards away on two occasions.

I wonder if they would breed and produce more albinos if they survived the hunters? — *Emil Stock*, Box 301, Leader, Sask.

LOOKING BACK

At Some Old Bird Names

Some English bird names that were officially recognized 100 years ago have now become officially obsolete. Pigeon Hawk, Sparrow Hawk, Upland Plover, Cnot, Catbird and Robin appeared in Elliott Coues' "Field Ornithology . . . and

a Check List of North American Birds”, published in 1874.⁴ In 1973, the American Ornithologists’ Union decreed that the official names of these species shall be Merlin, American Kestrel, Upland Sandpiper, Red Knot, Gray Catbird and American Robin, respectively. A history of some of the other species’ names affected by the 1973 report is presented in the table below.

| <i>Species Name in 1874⁴</i> | <i>Familiar Name and Date Originated^{1 2}</i> | <i>Species Name in 1973³</i> |
|---|--|---|
| Blue Goose | — | } Snow Goose |
| Snow Goose | — | |
| Red-tailed Buzzard | Red-tailed Hawk, 1886 | } Red-tailed Hawk |
| Harlan’s Buzzard | Harlan’s Hawk, 1886 | |
| Golden-winged Woodpecker | Yellow-shafted Flicker, 1957 | } Common Flicker |
| Red-shafted Woodpecker | Red-shafted Flicker, 1886 | |
| Yellow-rumped Warbler | Myrtle Warbler, 1886 | } Yellow-rumped Warbler |
| Audubon’s Warbler | — | |
| Baltimore Oriole | — | } Northern Oriole |
| Bullock’s Oriole | — | |
| Snowbird | Slate-colored Junco, 1886 | } Dark-eyed Junco |
| Oregon Snowbird | Oregon Junco, 1886 | |

The combining of birds once thought to be different species into one is the result of investigations that have shown that the birds interbreed often enough that they are different only as subspecies or that one is a colour phase of the other. The “old” (pre-1973) names are not “wrong” now, but they are restricted to the subspecies and a new name has usually been given to the new species. Other name changes involving Canadian prairie and northern birds are: Green-winged Teal becomes American Green-winged Teal to separate it from the Eurasian subspecies; Shoveler is now Northern Shoveler because there are shovellers elsewhere; Common Scoter changes to Black Scoter, a more appropriate name, and Yellowthroat becomes Common Yellowthroat to blanket a dozen subspecies. Widgeon is now spelled Wigeon (to conform with pigeon?) and Thayer’s Gull has been found to be a different species from the Herring Gull rather than a subspecies of it.

There is little reason for these name changes to upset anyone. After all, Sparrow and Pigeon Hawks are not appropriate names and the Upland Plover never was a plover. And if the Yellow-rumped Warbler you see has a white throat, then it is still a Myrtle Warbler. If there is doubt about the characteristics that separate it from Audubon’s, then it is a Yellow-rumped Warbler. Similarly, if the Junco in front of you perfectly matches your field-guide’s description of an Oregon Junco, then refer to it, record it and report it as an Oregon Junco. If in doubt, better call it a Dark-eyed Junco. — Bernie Gollop.

¹AMERICAN ORNITHOLOGISTS’ UNION, 1886. *The code of nomenclature and check-list of North American birds*. First Edition. University Press, Cambridge. 392 p.
²AMERICAN ORNITHOLOGISTS’ UNION, 1957. *Check-list of North American birds*. Fifth Edition. Port City Press, Baltimore. 691 p.
³AMERICAN ORNITHOLOGISTS’ UNION, 1973. *Thirty-second supplement to the American Ornithologists’ Union check-list of North American birds*. *Auk* 90: 411-419.
⁴COUES, ELLIOTT, 1874. *Field ornithology. Comprising a manual of instructions for procuring, preparing and preserving birds and a check list of North American birds*. Dodd and Mead, New York. 253 p.



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